Resolving Disparities in Infant Mortality:
A Michigan Statewide Summit

December 4, 2001

Summary of Proceedings

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Executive Summary

On December 4, 2001, the Michigan Department of Community Health brought together over 400 participants throughout the state, to continue state efforts to address the significant problem of infant mortality, with emphasis on the disparity between the infant mortality rates for white, black, and Native American infants.

The statewide summit, held at the University of Detroit Mercy, included a plenary session by state and national experts to enable a common understanding of the problems; followed by community leaders who have been examining and/or addressing the issue of infant mortality. Work group sessions, organized by community, were held in the afternoon. Each work group was given the charge of examining the problem of infant mortality from a community perspective using the tools advanced in the plenary session; then asked to develop recommendations that could impact the rates of infant deaths and narrow the gap between white, black, and Native American infant death rates within their communities.

Highlights of the Summit included comments by MDCH Director James Haveman, Detroit City Health Director James Buford and Wayne County Health Director Patricia Soares; presentations on the epidemiology of infant mortality in Michigan; presentations on local efforts in Kalamazoo, Flint and among Michigan's Native American Tribes that are having an impact in reducing racial disparities; and a presentation by Bill Sappenfield from Centers for Disease Control and Prevention (CDC) on the essential elements for successful community interventions to prevent infant deaths. The afternoon was devoted to meetings among community work groups to develop recommendations for local pursuit as well as to inform state and local policy leaders.

Director Haveman offered a challenge to the participants, "I am convinced that the success of addressing infant mortality in our state will only come, if community by community, the leaders and people who can influence change and resources accept the challenge of analyzing the specific at-risk populations and causes of death that are resulting in these high rates of infant mortality and commit to making something happen …What I challenge you to do today, is to commit to and contribute something unconditionally to address infant mortality and expect the same of each other."

Following the summit, the work group facilitators, recorders, presenters and MDCH staff reviewed the summit proceedings and the outcomes of each work group. Communities throughout the state are committed to reducing infant mortality.

This report is a summary of what summit participants perceive as issues and concerns that need to be addressed. An appropriate next step is for the Michigan Department of Community Health to determine the accuracy of the perception, issues and concerns raised and consider the recommendations. Many of the recommendations have potential policy and financial implications. State government will need to determine what is practical and cost effective in approaching this complex issue.

Identified Issues and Concerns

Mobilizing community and state resources to tackle the problem of infant mortality requires consideration of the wisdom from many sources. The epidemiological perspective provides population data to help understand the problem. The witness of direct service providers provides a passionate plea for quick attention. Public health experts review the value of existing programs to resolve the problem. And program administrators and professionals tell the story of what's happening now.

The solution cannot be found in one approach, but will involve many, many community-specific targeted strategies. Hence this summary of issues and concerns generated by summit participants is complex, and divided into several areas of focus.

Data Analysis:

- State and local data analysis revealed that infant deaths occur predominantly because of factors related to the Perinatal Period of Risk associated with Maternal Health and Prematurity.

- The population data shows that black babies are disproportionately affected by infant mortality, especially related to low birthweight, prematurity and SIDS.

- Some communities are experiencing a rise in black infant deaths since 1994-95 without a clear reason indicated.

- The inaccurate recording of American Indian race in vital health statistics and the small numbers mask the true problem in this minority population.

- The inconsistency in determining cause of death for infants, particularly related to when and how death scene investigation is done, affects data interpretation and development of effective prevention strategies.

- Lack of information on fetal deaths hampers the investigation of the larger population affected by low birth weight and prematurity.

Health Care:

- Limitations of the availability of health insurance negatively impact women's access to preconceptional care and entry to prenatal care. Despite recent policy improvements in timeliness of applications for Medicaid and assignment of medical homes, these issues are still often perceived as barriers to care.

- Obstetric providers and specialty care are either limited or not available in rural areas of the state.

- Timely availability of transportation to a health provider and the availability of childcare continue to limit access.

- Services targeted to specific groups such as teens and ethnic populations are limited.

- Support services**,** such as Maternal Support Services/Infant Support Services, Maternal Infant Health Advocacy Services, and local Outreach Workers that help identify links to care for pregnant women, need to be more readily available and better targeted.

- Screening and referral to services for known risks to positive birth outcomes such as mental health, genetic counseling, domestic violence intervention, substance abuse services, and dental care need to become routine. Language and cultural translation services are also needed.

- The lack of cultural competency in providers limits their acceptability to many at-risk families. "Accessibility does not mean acceptability."[1]

- Lack of coordination among providers and communication to and with clients hampers access.

Associated Risks for Infant Mortality:[2]

- Racism and real or perceived discrimination negatively affects health seeking behaviors.

- A large proportion of infant death is associated with unintended pregnancy.

- Screening for use of alcohol, tobacco, illegal drugs and domestic violence is not consistently performed by providers during pregnancy, leaving large deficits in identification of these risks. There is also a deficit of intervention programs for those with substance abuse.

- Maternal depression is a problem that needs clearer definition and recognition of its impact on infant health and safety. Screening and treatment is largely unavailable.

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1 Source: Geradine Simkins, RN, CNM, MSN, Inter-tribal Council of Michigan.

2 Associated Risks for Infant Mortality is a term used by FIMR teams to indicate health behaviors that are common among women and families who have experienced an infant death.

- The life context of the at-risk population has the greatest impact on health status. Poverty, housing, education, violence, unemployment, transportation and isolation are all highly associated with poor pregnancy outcomes.

- Many communities are finding that unsafe sleep arrangements are correlated with sudden infant death.

- Referral for child abuse and neglect are not followed up adequately.

Knowledge Deficit:

- Public understanding of good health care practices for pregnancy and parenting is a problem in many communities.

- Mentoring assistance to improve knowledge needs to be more readily available. Effective education must be delivered in a comfortable setting from people who are trusted.

- Families report significant lack of awareness of local services and resources.

Motivation:

- "If the heart of the community is not in it, the rest is of little merit."[3]

- "Change requires a combination of data, a plan and political will." "Most systems do not support change. Infant mortality is a social issue, not just a health issue."[4]

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3 Source: Arthur James, MD, Obstetrician/Gynecologist, Kalamazoo, Michigan
4 Source: Bill Sappenfield, MD, MPH, Medical Epidemiologist, CDC, Atlanta, GA

The 2001 Infant Mortality Summit proceedings reflected the current status of data analysis regarding infant death, the available information on access to health care, the growing information on behavior associated with infant death, and the prevailing lack of knowledge and motivation that exists to facilitate a change in health systems.

The state and local communities alike were challenged to initiate strategies to facilitate improvement in the health status of infants and families.

The Recommendations

Local communities must be encouraged to:

1. Develop Fetal-Infant Mortality Review (FIMR) teams.
2. Utilize Child Death Review and/or FIMR teams to dialogue with county medical examiners concerning consistency of cause and manner of death.
3. Facilitate prenatal care in the first trimester for all pregnant women.
4. Support traditional or cultural practices to enhance contact with health care.
5. Support community based health care settings, programs and resources that are more easily accessed and/or acceptable to at-risk populations.
6. Develop and distribute community resource directories to make consumers aware of where to go for help.
7. Provide mentoring and support, outreach and advocacy at the community level utilizing indigenous health workers and faith-based initiatives with the goal of building relationships and trust.
8. Utilize techniques that work for outreach such as: “house-to-house activities,” billboards and bus boards.
9. Foster MSS/ISS type services, including outreach workers as part of the team to improve the cultural competence and ability to engage families in health care.
10. Improve local provider knowledge and promotion of preconceptional health care issues.
11. Establish dialogue with community partners about the presence of racism in health care sources, developing awareness campaigns, and motivating the community will to discourage the practice of racism.
12. Encourage the comprehensive assessment of risks due to sexually transmitted disease, substance abuse, smoking, domestic violence, depression, social support, sexual abuse, housing, employment, transportation, etc. by all local providers perhaps as a local hospital delivery policy.
13. Schedule community dialogue to raise the awareness of consumers, policy makers, and providers of infant mortality issues and facilitate strategic planning.
14. Develop local community/business/health care partnerships to broaden the number of key stakeholders.
15. Develop systems to provide transportation and child care to women seeking prenatal care.

The state was encouraged to:

1. Improve the ability to collect and analyze data to direct state and local strategic efforts through:
   a. Training and validation of birth and death certificate data, particularly the reporting of race, ethnicity, smoking, and alcohol use.
   b. Exploring other sources of data on associated risks of infant mortality.
   c. Amending the Public Health Code to allow the identification of women experiencing a fetal death in order to properly study this phenomenon.
   d. Providing funding and technical assistance for development and support of local FIMR teams.
   e. Promoting consistency among Medical Examiners in determining the cause of unexplained infant deaths.
   f. Including indicators in the Title V plan that specifically address American Indian disparities.
   g. Regular evaluation of the efficacy of and targeting of resources for state funded infant mortality programs.

2. Improve access and quality of services available to pregnant women to improve maternal health and reduce the incidence of premature delivery and low birth weight.
   a. Adopt and promote prenatal care core concepts similar to those developed by Kent County.
   b. Foster the expectation among women and providers that prenatal care begins in the first trimester regardless of insurance coverage.
   c. Promote midwifery as a model of care for American Indian and other cultures that prefer this model through improved provider reimbursement and practice incentives.
   d. Support traditional or cultural practices, such as American Indian healing, to enhance contact with health care.
   e. Support outreach and advocacy to the at-risk population, mentoring and support for families to assure use of resources, and incorporate indigenous health workers and faith-based initiatives to help with service provision.
   f. Support public health and community based health care resources that are more easily accessed and/or acceptable to the at-risk populations.
   g. Advocate for the institutionalization of Healthy Start[5] as a permanent, federally funded, community-managed program, similar to Head Start, to reduce infant mortality.

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5 Healthy Start is a federally funded program to provide outreach, case management, and health education to the communities at highest risk of infant mortality. Consumer participation in a project consortium is designed to maximize the acceptability of project services. At the present time there are five funded projects in Michigan.

h. Improve access to mental health providers and substance abuse treatment facilities.
i. Assure screening and linkage to MSS/ISS-like services for all at risk women to improve their social/psychological environment.
j. Assure coordination of care between programs and parts of the health care system through incentives and evaluation.
k. Assure availability of mechanisms to assist transportation, including Medicaid reimbursement where applicable.
l. Work with providers who interact with women to expand knowledge of the importance of preconceptional care including primary health care, availability of non prescription vitamins, and health education.
m. Work to assure adequate and timely reimbursement of providers.

3. Reduce associated risks for infant mortality through:
   a. Introducing options for Work First requirements that allow new mothers time to focus on their new infant during the first year of life.
   b. Developing a statewide social marketing campaign to educate the public about behaviors that contribute to a healthy pregnancy and healthy babies, including the importance of fathers in the lives of their children.
   c. Promoting the comprehensive risk assessment of all pregnant women, particularly for sexually transmitted infection, substance abuse, smoking, domestic violence, depression, social support, sexual abuse, adequacy of housing, employment, transportation and other basic needs.
   d. Establishing one clear message of safe sleep position and environment for infants.
   e. Provide MSS services to women who have experienced an infant, fetal or pregnancy loss, possibly using MOMS funding.
   f. Expanding the options for parenting classes to meet the needs of more families.
   g. Reduce all barriers to women seeking use of contraceptive methods to reduce the incidence of unintended pregnancy.

Summit Plenary Proceedings

Opening Remarks

James K. Haveman, Jr, Director
Michigan Department of Community Health

Welcome and good morning. This is an important day for infants born to Michigan families. This is a day when people from all over the State of Michigan are coming together to try and improve the likelihood that babies born in Michigan have the best possible chance to survive and be healthy. Such an awesome job can only be done if hundreds, even thousands, even our entire citizenry are committed to this cause.

Today, you represent many communities in our state. Some of you here may remember similar efforts to address infant mortality back in the late 1980s. At that time a blue ribbon committee was appointed and produced a report, a summary of which is in your notebooks today. You will see that our state implemented many of the recommendations that were contained in that report, and much of it was focused on what the state, or government, should do. For a few years, we appeared to have made some progress in our infant mortality rates. But as most of you know, our progress has leveled off.

I am convinced that the success of addressing infant mortality in our state will only come if, community by community, the leaders and people who can influence change and resources accept the challenge of analyzing the specific risk populations and the causes of death that are resulting in these high rates of infant mortality and commit to making something happen.

It is my hope that this day will lead to a commitment by many of the communities in our state. Some of you were invited particularly to this summit because you live in communities that unfortunately must contend with some of the highest infant mortality rates in Michigan. I am aware that some of you have already formed consortiums and begun collaborative efforts to address infant mortality. Later this morning we will hear from a few of these communities. I commend you for this.

However, I still feel that much too often we have a tendency, after a short period of time, to want to delegate the entire responsibility to address the problem of infant mortality to one or two entities, such as health departments or medical care systems. If we have learned nothing else about this perplexing issue, it is that it is extremely complex, multifaceted and only impacted when long and sustained commitments are made by many agencies and systems.

No one here, no single agency or system, is likely to have any success improving our rates without the partnership of others. Most of us are perfectly happy to point to somewhere else we think the responsibility should lie, and we expect others to “take the

lead" which often means "do all the work." This model does not work. I would propose that if each person, system and agency here today will accept some responsibility for contributing unconditionally to this problem in your community, we will see future progress.

Too often I hear, "we will help if someone else provides the resources." As long as that attitude prevails, I believe we are very unlikely to meet the challenge before us. What I challenge you to do here today is to commit to and contribute something unconditionally to address infant mortality, and expect the same of each other. This morning, this noon and during the first part of the breakout sessions, you will be presented with as much information as possible to equip you for the challenge before us. The afternoon sessions are intended for each community here to begin to identify the necessary partners and interventions that must be brought to bear in each of your communities in order to lower our rates of infant deaths. For those of you that have already begun the process in your community, please take this time to reflect on your efforts thus far and hone your strategies.

I would like to recognize organizations that have directly contributed funding and resources for this summit. These include the Michigan Chapters of March of Dimes, the Michigan SIDS Alliance, the CJ Foundation for SIDS and U.S. Department of Health and Human Services, Health Resources and Services Administration. Funding as well as invaluable staff resources to help us organize this conference has come from the federal Community Integrated Service Systems Program, funded by the federal Maternal and Child Health Bureau. A CISS project officer, Mr. Joe Zogby, is here as is staff from CISS' subcontractor, Health Systems Research. Thank you all very much.

Let us begin our proceedings. Have a great and productive day.

The Epidemiology of Infant Mortality in Michigan

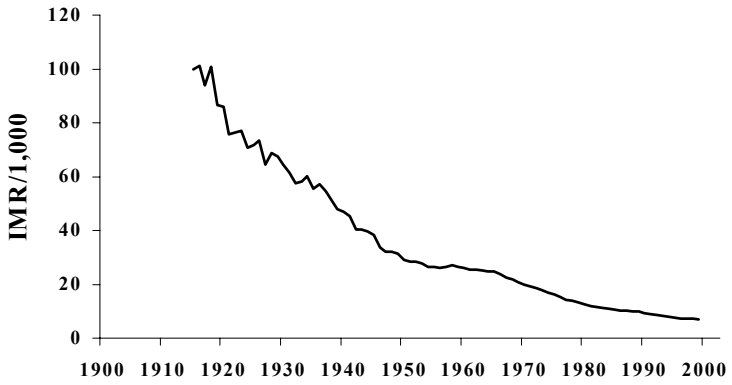
David R. Johnson, MD, MPH
Deputy Director and Chief Medical Officer
Michigan Department of Community Health

Trends In Infant Mortality

Infant mortality is a critical indicator of the health of a population. Two of the Healthy People 2010 Goals are directly related to the objectives of this summit. The first is to reduce infant mortality rates (IMR) to 4.5 per 1000 live births. The second is to eliminate the racial disparities in the IMR.

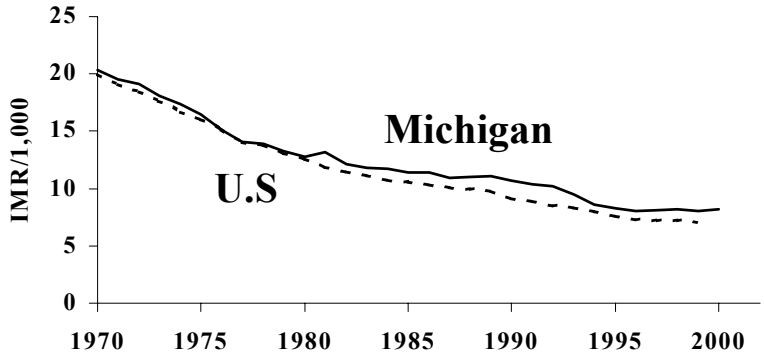
From the historical perspective, we as public health professionals are proud to see that great progress has been made in the U.S. in reducing IMR during the 20th century. In 1915, when credible data on IMR first became available, the IMR in the U.S. was about 100 per 1000 live births; that is, 1 in 10 infants would die before they reach one year of age. In 1999, however, the IMR rate was approximately 7 per 1000 live births. In other words, there was a 14-fold decrease in IMR in the U.S. during the past century (Figure 1).

Fig. 1. U.S. Infant Mortality Rate, 1915 - 1999



Despite the overall progress we made during the past century, the decline in IMR in recent years has slowed down considerably in the U.S. in general, and more so in Michigan. In fact, since 1995, the IMR in Michigan has been stagnant, while the U.S. rate has continued to decline. When we compare the Michigan data with the U.S. data, we can see that the IMR in Michigan was slightly higher than the overall IMR in the U.S. prior to 1975, and converged with the U.S. rate between 1975 and 1980. However, since 1980, the Michigan IMR has been consistently higher than the U.S. rate (Figure 2).

Fig. 2. Infant mortality rate: MI vs. U.S., 1970-2000



If the current trend continues, neither the U.S. nor the Michigan IMR will reach the Healthy People 2010 Goal of 4.5 per 1000 live births.

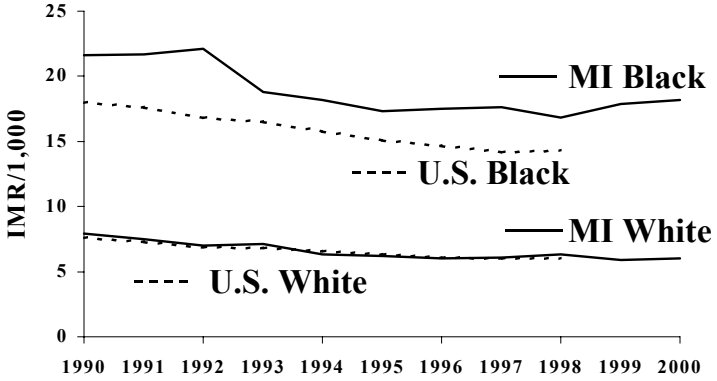
When we examined the IMR by racial and ethnic groups, a clear pattern emerged: The IMR does not differ greatly among whites, Asian Americans, Arabic Americans, and Hispanics. However, Native Americans and blacks have much higher IMR than the other racial and ethnic groups (Table 1). Since we do not have enough data for the Native American population, we will focus on the differences between blacks and whites. When we compare the IMR between Michigan and U.S. by race, we see that the IMR for Michigan whites is almost indistinguishable from that for the U.S. whites. However, the IMR for Michigan blacks is substantially higher than that for the U.S. blacks. Therefore,

Table 1. Live births and infant mortality by race/ethnicity, 2000

	Birth	Deaths	Rate
Total	**136,048**	**1,112**	**8.2**
White	**106,322**	**637**	**6.0**
Asian	**3,766**	**21**	**5.6**
Arab	**3,391**	**20**	**5.9**
Hispanic	**6,923**	**46**	**6.6**
Native American	**674**	**9**	**13.4**
Black	**24,069**	**437**	**18.2**

the disparity between the two racial groups in Michigan is larger than that in the U.S. To look at the data in another way, while nationally the black-to-white ratio in IMR during the 1990s has been approximately 2.4, that ratio has varied between 2.6 and 3.2 in Michigan (Figure 3).

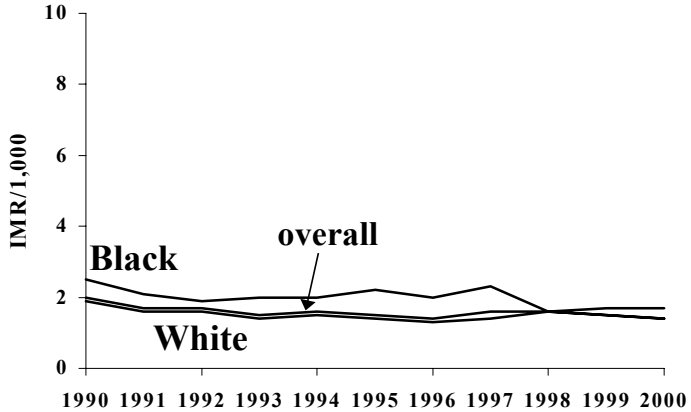
Fig. 3. Infant mortality rate, by race, MI vs. U.S., 1990-2000



Leading Causes Of Infant Mortality

When we examine the causes of infant mortality in Michigan, we see that for both black and white infants, the three leading causes of infant deaths are: Congenital anomaly, sudden infant death syndrome (SIDS), and low birthweight/prematurity.

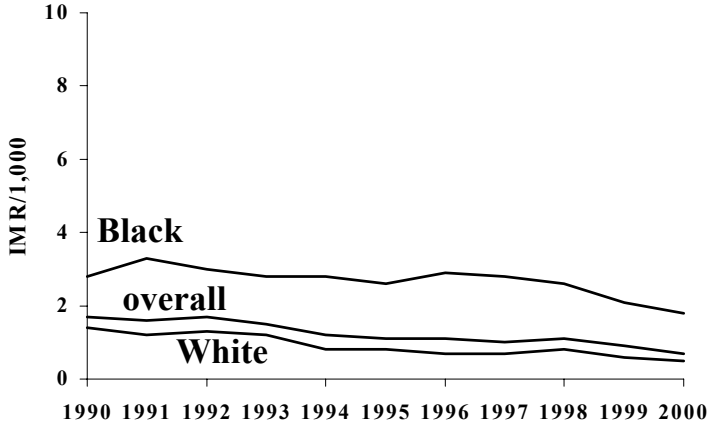
Fig. 4. IMR due to Congenital Anomalies, by race, MI, 1990-2000



Congenital anomaly has been one of the leading causes of infant deaths in recent years. Overall, the IMR due to congenital anomalies decreased from 2.0 per 1,000 live births in 1990 to 1.4 in 2000, a 28 percent reduction. The IMR due to congenital anomalies for blacks is fairly close, albeit a little higher, than the rate for whites (Figure 4).

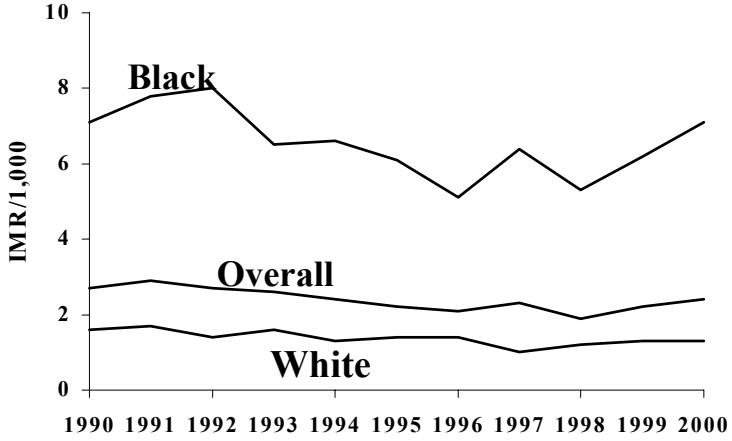
SIDS is another leading cause of IMR. During the past two decades, SIDS declined by an impressive 58.4 percent in Michigan, from 1.7 in 1990 to 0.7 per 1000 live births in 2000. This is at least in part due to the nation-wide "Back-to-Sleep" campaign. However, the pace of decline in IMR due to SIDS is not uniform across all racial groups. Among white infants, the rate declined by 65.2 percent, whereas among black infants, the rate only declined by 35.3 percent. In 2000, black infants were 3.8 times as likely to die of SIDS than white infants. This racial disparity for SIDS is considerably higher than it is for congenital anomaly (Figure 5).

Fig. 5. IMR due to SIDS, by race, MI, 1990-2000



Low birthweight (LBW) and prematurity is the leading cause of IMR for both black and white infants in Michigan. However, it affects black much more than white infants. During the past decade, black infants have been 4 to 5 times as likely to die of this condition than white infants. The IMR due to LBW/prematurity declined slightly for white infants during the last decades. For black infants, the IMR due to LBW/prematurity declined during the early part of 1990s. However, the rate has stopped declining since 1996. In fact, one may argue that it has increased since 1996 (Figure 6).

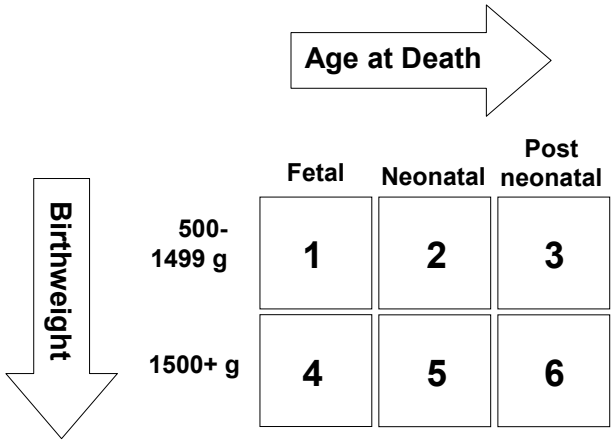
Fig. 6. IMR due to LBW/Prematurity, by race, MI, 1990-2000



The Perinatal Periods Of Risk Approach

In order to further reduce IMR, especially for black infants, we need to develop new tools to thoroughly analyze the available data, and to translate the data into useful information to guide public health interventions. One such tool is the Perinatal Periods of Risk (PPOR) Approach, which is developed by CityMatCH, under the guidance of Dr. Bill Sappenfield. CityMatCH is a national organization serving the MCH populations in urban areas.

Fig. 7. Map feto-infant deaths

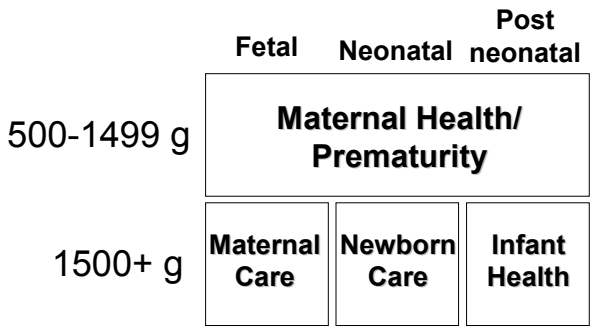


The PPOR has several desirable properties: It is a simple approach; it is easily applicable by communities; it can help target resources for prevention and mobilize communities to action. To use this model, one first maps feto-infant mortality rate by two factors. The

first factor is birth weight, i.e., <1500g and 1500+ g. The second factor is time of death, i.e., fetal deaths, neonatal deaths (death occurring within the first four weeks of life), and post-neonatal deaths (death occurring from four weeks to one year of life). This results in the deaths being mapped into a matrix of six cells (Figure 7).

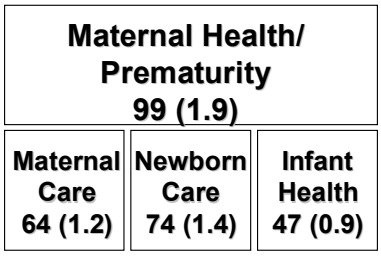
Statistical analysis shows that these deaths can be classified into four categories. Each category has a different primary preventive direction. For example, feto-infant deaths with birth weight <1500 g can best be prevented by addressing maternal health issues, and by preventing and treating low birth weight and prematurity. To prevent deaths that have higher birth weight, different strategies can be used depending on the timing of deaths: Fetal deaths can best be prevented by improving maternal care; neonatal deaths, by improving newborn care; and post-neonatal deaths, by improving infant health (Figure 8).

Fig. 8. Maps of feto-infant deaths in relation to prevention opportunities



The second step in PPOR analysis is to create a reference population. The reference population is usually a subset of the population with relatively low feto-infant mortality rate. The rationale behind the creation of the reference population is that, if a certain subpopulation can achieve this low level of feto-infant mortality, other populations should also be able to reach this level. For the statewide PPOR analysis, the reference population is the Michigan non-Hispanic White women aged 20+ years, with 13+ years of education in 1999. The feto-infant mortality rate for each cell or category in the reference population can be calculated by dividing the number of death in each cell by the total number of fetal deaths and live births. The overall feto-infant mortality rate for the reference population can be calculated by dividing the total number of fetal and infant deaths by the total number of fetal deaths and live births. It is also the sum of the feto-infant mortality rates in the cells and group (Figure 9).

Fig. 9. Reference: MI non-Hispanic white women aged 20+, with 13+ yrs education, 1999

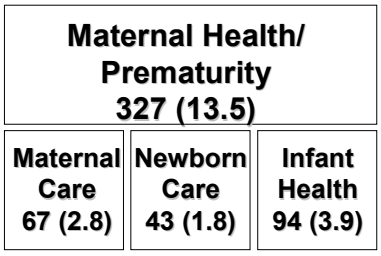


284 fetal or infant deaths

Total feto-infant mortality rate: 5.4

Next, one can examine the feto-infant mortality rate for the target population. For example, for blacks in Michigan, a total of 531 fetal and infant deaths occurred during 2000 (Figure 10). These deaths were mapped into the PPOR matrix, and the feto-infant mortality rate was calculated for each category. The total feto-infant mortality rate was 21.8 per 1000. Subtracting the reference population rates from the feto-infant

Fig. 10. Feto-infant mortality rate among Blacks, MI, 2000



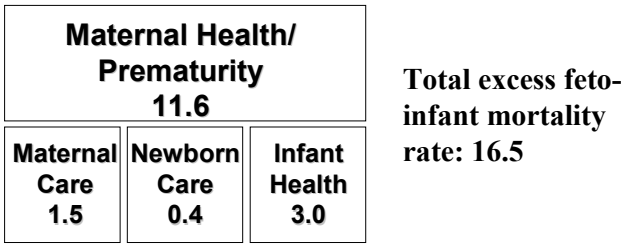
531 Fetal or infant deaths

Total feto-infant mortality rate: 21.8

mortality rate in each category gives the excess rate for each individual category. Overall, the feto-infant mortality rate among blacks could be reduced by 16.5 per 1000 if they were to do as well as the reference population. Moreover, by examining the excess rate in each category, we can identify our best opportunities in reducing feto-infant mortality. For example, the largest opportunity gap for blacks is in the Maternal Health / Prematurity category. The next largest opportunity gap is the infant health category.

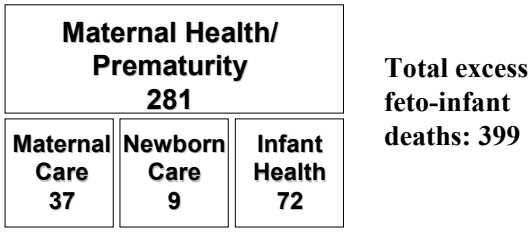
Therefore, in order to effectively reduce feto-infant mortality rate, we need to work on strategies to improve maternal health, prevent prematurity, reduce low birth weight, and improve infant health (Figure 11).

Fig. 11. Excess feto-infant mortality rate among Blacks, MI, 2000



To put it in another way, one can calculate the excess number of feto-infant deaths (Figure 12). In total, 399 fetal and infant deaths (out of a total 531, as shown previously) in the black community were excess deaths compared to the reference population. From this, we can also see that our best opportunities are in the maternal health / prematurity category, with 281 excess deaths, and in the infant health category, with 72 deaths.

Fig. 12. Excess number of feto-infant deaths among Blacks, MI, 2000



Once we have identified the opportunity gaps, we can use this information to guide our intervention strategies. For example, for the maternal health/ prematurity category, which has the largest opportunity gap, communities may need to focus their efforts on reducing unintended pregnancy, smoking, drinking, illicit drug use, stress, racial discrimination,

promoting healthy diet, optimizing pregnancy interval, improving pre-conceptional care, and promote overall fitness. On the other hand, for the infant health category, communities may need to focus on SIDS prevention activities, such as sleep position, education, and smoking reduction. They may also need to work on promoting breast-feeding, improving access to medical homes, and preventing intentional and unintentional injuries.

Infant Mortality In Selected Counties Or Cities

Ultimately, in order to further reduce infant mortality and eliminating racial disparity, all stakeholders will need to make concerted efforts at the community level. Therefore, let us examine the information regarding IMR in 10 counties or cities throughout Michigan (in alphabetical order), that have the largest problems with infant mortality.

Berrien County: The overall IMR for Berrien County in 2000 is 8.4 per 1000 live births, which is comparable with the state rate. However, there is a large racial difference: The IMR for African-American infants is 23.6, compared with the rate for white infants of 3.1. Note that because the number of white infant deaths is small, we have to interpret this rate with caution.

Detroit City: The overall IMR for Detroit City is 14.7. The rate for African-American infants is 16.2, much higher than that for white infants, 7.4. Notice that, contrary to common perception, the racial disparity in IMR in Detroit City is actually smaller than in most other metropolitan areas in Michigan.

Genesee County: The overall IMR for Genesee County is 12.3. However, the rate for African-American infants is 21.7, much higher than that for white infants, 8.4.

Ingham County: The overall IMR for Ingham County is 7.7. The rate for African-American infants is 20.8, much higher than that for white infants, 4.9.

Kalamazoo County: The overall IMR for Kalamazoo County is 8.8. The rate for African-American infants is 20.6, much higher than that for white infants, 6.8.

Kent County: The overall IMR for Kent County is 9.1. The rate for African-American infants is 17.8, much higher than that for white infants, 7.8.

Oakland County: The overall IMR for Oakland County is 6.5. The rate for African-American infants is 25.2, much higher than that for white infants, 4.3.

Saginaw County: The overall IMR for Saginaw County is 9.5. The rate for African-American infants is 20.2, much higher than that for white infants, 4.9.

Washtenaw County: The overall IMR for Washtenaw County is 8.0. The rate for African-American infants is 18.5, much higher than that for white infants, 6.3.

Wayne County (Excluding Detroit): The overall IMR for Wayne County (excluding Detroit) is 6.6. However, the rate for African-American infants is 20.3, much higher than that for white infants, 5.1.

From these data we can see that there is a large racial disparity in IMR in all these communities. While the IMR in the white populations is relatively low (in fact, in some of these communities the IMR for white infants has reached the Healthy People 2010 Goal of 4.5 per 1000 live births), the IMR in the African-American population continues to be at an unacceptably high level.

Conclusions

From the epidemiologic data we presented, we may draw the following conclusions:

1. Great progress has been made in reducing infant mortality during the past century.

2. The infant mortality is higher in Michigan than in the U.S.

3. Racial disparity is larger in Michigan than in the U.S.

4. Low birthweight / prematurity, SIDS, congenital anomaly are the leading causes of infant mortality.

5. The Perinatal Periods of Risk Approach helps guide prevention strategies.

6. Community ownership is essential for further reduction in infant mortality.

An Impacted Community: Kalamazoo
Healthy Babies, Healthy Start: Success in Collaboration
"Striving for 4.5"

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Infant mortality is a broad term used to describe a consequence that has many different causes. These deaths are the result of multiple risk factors. These risk factors can be social (poverty, undereducated), or medical (multiple gestation, maternal medical conditions requiring early delivery), or economic (unemployment, poor economy), or biological (race, congenital anomalies), or behavioral or cultural (late initiation of prenatal care, smoking, drug use). Sometimes the cause(s) are not well understood and therefore difficult to categorize (SIDS). Frequently combinations of risk factors from one or more of these general groups occur.

Recognizing, diminishing, eliminating, or preventing the potential effect(s) from as many of these factors is our community's responsibility. A portfolio of various tactics is necessary. Our strategies will vary depending on which factors we are combating, the segment of the community we are working with, our resources, and available technology/knowledge. Some strategies will be more complex, costly and time-consuming than others. Certain solutions have already been developed and are underutilized in all or part of our community; others will require creative and sometimes Kalamazoo-specific approaches. We expect to utilize our entire arsenal of resources in order to decrease the occurrence of this devastating problem.

The black infant mortality rate is significantly different in various regions of the country. When we examined the black Infant mortality rates of various states within the United States from 1980-1998, Michigan had one of the worst rates during this time. African-Americans entered this country as slaves. They were concentrated in the southern states until the Emancipation Proclamation resulted in the migration of freed slaves to various areas of the country. We have no reason to believe that blacks settling in Michigan were more fragile migrants than African-Americans settling in other regions of the country. So why is the black infant mortality rate in many other states so much better than it is in Michigan? Why are we so much worse than the rest of the country?

Similarly, when we compared the black infant mortality rates of various Michigan counties from 1980-1989, Kalamazoo County had one of the highest black infant mortality rates in Michigan. Why? Assuming African-Americans are not substantially different in Kalamazoo County than in other Michigan communities, and that the provision of care in Kalamazoo is comparable to that in the rest of the state, why would the black infant mortality rate be so much higher in Kalamazoo? While we do not have answers to all of these questions, the glimmer of hope for all of us is that if the at-risk population is similar and the provision of health care comparable then we should be able

to improve the outcome to at least the level of other Michigan communities. It was on the basis of this optimism that we began to suggest improvement was a realistic possibility for the Kalamazoo community.

We initially formed a community coalition of individuals concerned with our high infant mortality rate, especially our high black infant mortality rate and the substantial disparity in the black/white rates. Subsequently a FIMR team was formed, and later we received grant funds from Healthy Start. Our efforts have concentrated on educating both the general community and the at-risk population. We have encouraged the earlier initiation of prenatal care, avoidance of risky behaviors, education regarding the signs and symptoms of preterm labor, and safe sleep environments. Several neighborhood-oriented forums and community-wide conferences have been conducted, various media involvement (newspaper, radio, television, bill-boards, mailings, etc.), medical grand rounds, as well as many one-on-one sessions with patients.

As a consequence of a community-wide collaborative effort, from 1996-2000, Kalamazoo County has experienced an improvement in its black infant mortality rate, with the rates for 1996, 1997, and 1999 representing the lowest black infant mortality rates recorded in the history of Kalamazoo County. However, the black IMR goals for Healthy People 1990 and 2000 were not achieved. The goal for Healthy People 2010 is an infant mortality rate of 4.5 and the elimination of racial disparity. The current trend line in Kalamazoo, extrapolated from 1980-2000 data, suggests that if we remain diligent it may be achieved.

In order to accomplish our goal of a rate of 4.5, a "net" must be thrown out over the community reeling in every risk that contributes to infant mortality. Out of all black infant births, 27 percent of the mothers are teenagers, whereas only about 9 percent of white births occur to teens. About 6 percent of all Kalamazoo white births are low birth weight, compared with about 12 percent low birth weight births to blacks. These low birth weight babies account for the majority of infant deaths in our community, 64 percent of white and 73 percent of black infant deaths during the 1990s. Every factor must be considered. When communities choose not to collaborate, children continue to be the casualties of our conflicts.

An Impacted Community: American Indian Tribes Improving American Indian Perinatal Outcomes: The Maajtaag Mnobmaadzid Healthy Start Project

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Inter-Tribal Council of Michigan

Although most tribes in Michigan are concentrated in the northern part of the state, it is important to realize that there are Native American people living in every county in the state, including large populations in cities like Grand Rapids and Detroit. Not all Native American people are enrolled tribal members. Federally recognized tribal membership has specific legal definitions and requirements. Not all Native American people can document or choose to pursue tribal membership, but they are still part of the Native American community and population.

The name of the Inter-Tribal Council Healthy Start project, Maajtaag Mnobmaadzid, means the start of a healthy life in the Ojibway. The project serves families in seven different tribal communities or 29 counties. This year the Grand Rapids area has been added. Each site has at least one nurse and outreach workers who provide home visits, referrals and education. The local and statewide consortia address systems issues and organize community education and provider training events. The Healthy Start model is community based and believes in the sacredness of all. The project provides more than just screening and risk monitoring; providing social support and building on individual and community strengths are equally important. The operating principle is that it takes a healthy mother to have a healthy baby. Therefore, follow-up is provided for two years postpartum. Another important principle is that clients benefit most from health services when they feel respected by the people delivering the services, and can receive the services without hassle.

This project conducted focus groups regarding the availability and quality of services from local agencies, hospitals and medical practices. The findings indicate that current perinatal systems fail to meet the needs of Native American families. In order to affect the systems, models that are already working need to be examined. These include:

- Traditional American Indian healing practices
- Midwifery models of care
- Community based public health models
- Racially and culturally competent primary care

One of the challenges of reporting on Native American infant mortality in Michigan relates to data. Race is defined as white, black and other. Through collaboration with Healthy Start, the state has helped this project by providing vital record data for analysis. Several unique challenges come into play when using vital record data. Reporting of American Indian race is often inaccurate and inconsistent. For example, an infant is coded as American Indian at birth, and then coded as white at death.

In order to solve these data problems, when vital record data is analyzed, a birth is counted as Native if there is any mention of American Indian race for the infant, mother or father on the birth certificate. For infant deaths, linked birth/death certificate files are used. Again, cases are counted as Native American if there is any mention of American Indian race for the mother, father or infant. To minimize the effect of random year-to-year fluctuations in numbers of events, infant mortality rates are calculated using 3 and 5-year averages for this population.

The Native American infant mortality rate is between 12 and 14 deaths per 1,000 live births, which is two to three times higher than the rate for white infants. Post-neonatal death is the most frequent cause of infant mortality in the Native American population. Overall, the rate of death due to SIDS for Native Americans is more than four times higher than for whites, and probably accounts for one third of the total disparity between Native Americans and whites.

Contributing factors to infant mortality at the individual level include a very high rate of maternal smoking. Almost 70 percent of the Healthy Start participants lived in a household with at least one smoker. At the community level, there is a high level of social stress with 18 percent of Healthy Start participants reporting a history of domestic violence and 10 percent reporting currently being unsafe at home. At the systems level, access to specialty care providers and advanced care facilities is limited, and too many women are not getting early or adequate prenatal care. In the perinatal system, there is a chronic shortage of providers such as OB GYN's, midwives and pediatricians. Services are fragmented and clients often lack a medical home. Clients have to go one place to get WIC, another place to sort out Medicaid papers, another place for clinical care, and so on.

Several goals were identified relating to health services for Native Americans. These include reducing smoking, increasing immunizations, improving disclosure of substance abuse, providing education for women and their partners, providing support and referrals on domestic violence. Provider training regarding culturally competent health care will decrease barriers and improve the quality of care.

Some recommendations that will improve the birth outcomes for Native American babies include:

1. Work with and through tribes as full partners to address Native American infant mortality.
2. Aggressively pursue changes in perinatal systems that will improve the quality of and access to effective health care services, resulting in improved outcomes for Native American populations.
3. Update Michigan's vital records system to ensure tracking of data specific to American Indian tribal communities.
4. Commit resources to action: Include Michigan tribes in Title V planning and priority setting.

5. Include indicators in the Title V plan that specifically addresses Native American disparities.
6. Allocate funds for programs that address gaps in services for Native Americans.
7. Advocate for the institutionalization of Healthy Start as a permanent, federally funded, community-managed program, similar to Head Start.
8. Inform and educate the public through programs that engage and empower local communities with knowledge and resources.

An Impacted Community: Flint Reducing African American Infant Mortality in Genesee County

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Representing the REACH Team

Academia, public health professionals and community residents possess a range of perspectives and perceptions about the factors responsible for infant mortality and the steps necessary to reduce it. A process that allows an opportunity for each perspective to be heard and for a plan that benefits from the wisdom of each can help achieve the change in community culture necessary to improve the public's health. If one person or organization alone could improve the public's health, it would be better than it is now.

Genesee County's REACH (Racial and Ethnic Approaches to Community Health) Team employs a process grounded in the philosophy known as community-based public health. The REACH team is comprised of representatives from academia, the public health system, and community organizations. Partners are encouraged to retain their own attributes and appreciate those brought to the dialogue by others. Some lessons learned by the team:

- Making a meaningful reduction of infant mortality in Genesee County really means reducing African-American infant mortality.
- Listening to someone else's explanation is as important as presenting one's own.
- Experience, language and culture influence one's worldview.
- Trust can be created among residents with different perspectives.
- Residents of each world have something to share with one another.
- Reforming resource distribution can increase the formation of trust.

In order to form a successful partnership, several characteristics must exist. These include an appreciation for the length of time necessary to establish trust; a shared sense of purpose; a personal and organizational commitment to the issue and process; recognition that personal relationships as well as expert relationship skills are necessary; safe space for frank conversation without fear of retribution or personal offense.

The REACH Team has three main objectives:

1. To utilize each other's assets to improve the public's health
2. To reduce African-American infant mortality as an end in itself and as a precursor to better adult health
3. To integrate the knowledge of "bench" and "trench"

What we know from the "bench":

- Lower birth weight among African-Americans in Genesee County accounts for higher infant mortality rates.
- Lifestyle decisions may contribute to lower birth weight.
- Human service interventions and information may influence lifestyle decisions.

What we know from the" trench":

- African-Americans are as diverse as any other racial, ethnic or cultural community.
- Being African-American is different from being European-American.
- Collective memory among a community of people influences their use of any system, e.g. the medical care system.
- Lifestyle decisions aren't made in a vacuum; they are influenced by the surrounding environment, politics, and culture.
- Racism must be undone.
- Parts of the perinatal system must be retooled:
    - Medicine is necessary, not sufficient, and sometimes irrelevant to infant mortality reduction.
    - Language used by patients and professionals is a barrier to effective utilization of services.
    - Dialogue should form the basis for the each clinical encounter between patient and health professional.
    - Professional education and training processes and content must be enhanced to reflect the trench perspective.
    - Outreach, advocacy, mentoring and support are areas of expertise whose use must be expanded in the perinatal system in order to reach otherwise inaccessible patients. These areas can be viewed as opportunities for entry level employment in the public health system.

The REACH Team's work is focused on three themes: reducing racism, enhancing the perinatal or baby care system; and fostering community mobilization. These themes are operationalized through the following four strategies:

1. Community dialogue and awareness
2. Education and training
3. Outreach and advocacy
4. Mentoring and support

The REACH 2010 Team is a successful example of community level partners working together to reduce infant mortality locally through a variety of methods. In its first year of operation, the REACH team has: sponsored four Undoing Racism and two Healing Racism Workshops; conducted two community dialogue series; expanded opportunities for mentoring, support, outreach and advocacy; sponsored a community rally and picnic; begun sessions to achieve consensus among local physicians; conducted one faculty training and three in-class discussions; survived multiple site visits and meetings; and, linked all current infant mortality reduction efforts in the county.

Finding Common Ground
Preventing Infant Deaths: Essential Elements for Success

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From the Bible in Matthew 6:21, Matthew tells us, "For where your treasures are, there will your heart be also." It will take a lot of heart to reduce infant mortality. If the heart of the community is not in it, the rest of our efforts will be of little merit.

To reduce infant mortality, there are common community myths that need to be refuted:

1. There is one main cause for infant mortality.

We need to recognize that there are many causes of infant mortality. The issues surrounding maternal and infant health need to be peeled back like the layers of an onion to discover the root causes. We need to look at what has caused past improvements, (e.g., surfactant, the "Back to Sleep" campaign, and folate promotion). We need to also look at newly identified causes. Bacterial vaginosis and stress are emerging as possible contributing factors to poor birth outcomes. We need to keep in mind that solutions may be either high tech or low tech. There are no silver bullet answers.

2. Any prevention strategy will work.

We need to develop scientific strategies based on what is known about infant mortality. There are five basic steps to implementing a new approach to examining infant mortality called Perinatal Periods of Risk (PPOR):

- Engage community partners
- Map feto-infant mortality
- Focus on overall rate
- Examine potential opportunity gaps
- Target future efforts

This approach helps identify what proportion of a community's fetal and infant deaths are preventable. Fifty-three percent of excess deaths in Michigan are potentially preventable. Seventy-three percent of excess deaths in Michigan are linked to maternal health/prematurity; 17 percent to infant health; 9 percent to maternal care and 1percent to newborn care. This type of mapping will show communities where their resources and energies will be best directed to reduce infant mortality.

3. A narrowly targeted strategy works best.

We need to promote multi-sector strategies if we want to make a lasting difference in our communities. In describing the tragic death of an infant named Donny, multiple systems of care were identified that could have prevented Donny from dying. We need to advocate for improvement through community change, and not through grant funding which cannot be sustained. There are different approaches to fixing community problems: "Bull's Eye," "Smoke Ring," and "Scoop." We really need to use the "Pie Slice" community approach as a long-term strategy.

4. Focus only on reducing infant mortality.

Since infant mortality is just the tip of the iceberg, we need to focus on the broader issues of women's and infant health. Most approaches to reduce infant mortality improve overall health. Underneath the surface lie a multitude of issues surrounding pregnancy and infant health (e.g. substance abuse, poverty, learning disorders, crime, etc.). We need to develop a clear community vision for all mothers and all babies.

5. Data or a plan is enough to create change in a community.

True community change requires not only a combination of data and a plan, but also requires political will. Data to action equals the opportunity for change and results. Within a community, the knowledge base, the social strategy and the political will need to feed into one another to be successful. In the Data Use Triangle model, data and analysis are in one corner, planning and programs are in another, and politics and policy are in the third. In the center of the triangle is translation. It takes all three types of people to successfully translate data into action.

In summary, the essential elements for community success in reducing infant mortality are: 1) recognize there are many causes, 2) develop strategies based on the problem and science, 3) promote multi-sector strategies, 4) focus on women's and infant health, and 5) begin this work with data, a plan and political will.

Community Work Groups

Berrien County

Summary of Discussion

There are no clear reasons for the steady increase in the black infant mortality rate. The group suggested that the black population of Berrien County experiences the following challenges: high teen pregnancy, poverty, low literacy, high unemployment, transportation difficulties, high crime rates, drug/alcohol abuse, high risk sexual behaviors, lack of support in school systems, homelessness and substandard housing.

There are also many assets and resources in the black community. Some that were identified are: young professionals returning to the community after completing their education, the availability of churches and civic/social clubs, strong extended family connections, effective informal communication system, definite sense of community, growing black middle class and the presence of black professionals in health care organizations.

Issues and Concerns

Trevor Portenga, epidemiologist for the Berrien County Health Department, presented infant mortality statistics for Berrien County. Racial disparity is clearly indicated. Even more alarming, though, is a definite rise in the black infant death rate from 1994 to 2000. Because numbers are small, rates were charted using three year moving averages. The black IMR for 1994-1996 was 15.50, increasing each year to 23.90 for 1998-2000. The white IMR was 6.0 for 1994-1996, decreasing to 4.0 during 1998-2000. Based on PPOR, Berrien County data strongly suggests focusing on maternal health when developing community interventions. The second area of concern is infant health.

Work To Be Done

Funding resources need to be identified because much of the work to be done requires additional financial resources. Also, consistent access to infant mortality data is necessary. It is difficult to gain political will without reliable data. Organizations that will champion infant mortality as an issue need to be identified and asked to convene a consortium.

Recommendations

1. Initiate a consortium using the Healthy Start model to unite the black community with health care systems.
2. Berrien County needs a FIMR team to help understand the IMR and develop appropriate community interventions.

City of Detroit

Summary of Discussion

The session began with a presentation by Dr. Valerie Rice and Virginia Gilbert, MPH epidemiologists for the Detroit Health Department.

Dr. Rice presented data/slides for the City of Detroit. This included Detroit's community profile, trends, a map of deaths, LBW and prenatal care trends. Virginia Gilbert presented the perinatal periods of risk approach. This presentation included a map of feto-infant mortality, the limitation of the model, map connections, excess feto-infant mortality and deaths by birth weight. She noted that the analysis provides guidelines to strategically reduce infant mortality. Essentially, PPOR and the data support what we already knew. It serves as a guide for future discussions to focus our efforts. Based on PPOR, the Detroit deficiencies are maternal health and infant health.

Dr. Sophie Womack, perinatologist, Sinai-Grace Hospital, noted that newborn care had improved significantly with new technologies. New modalities have provided good care for neonates. The problem is not being able to keep them alive when they leave the NICU. Infant health rate indicates we are not doing a good job with the mother and infant.

Issues and Concerns

<u>Maternal Health Issues</u>

- Limited access to care due to a lack of insurance
- Insurance doesn't begin until pregnancy
- Are not aware they can get insurance
- Language and cultural barriers
- Late entry into prenatal care
- Transportation
- Work First programs that are not open after hours
- Childcare availability and quality
- Substance and/ or sexual abuse
- Maternal education/Literacy
- Cultural sensitivity
- Teen pregnancy
- Downsizing of community and school based services; accessibility reduced
- Social problems: economics/poverty
- Housing
- Lack of quality health care workers
- Lack of mental health services
- Misinformation/myths
- Lack of coordination of care
- Values and lifestyle choices
- Lack of respect when seeking prenatal care
- Dehumanizing system of care
- Provider's lack of knowledge of previous birth outcomes
- Lack of preconceptional health care
- Lack of support system
- Lack of basic sustenance such as food, clothing and shelter
- Decreasing availability of family planning
- Medicaid doesn't pay for birthing classes
- Infections; STDs have increased

- Lack of information combined with lack of common sense
- Parenting education/poor parenting
- Poor nutrition
- Dental screening and treatment
- Genetic counseling
- Prenatal counseling
- Domestic violence

- Motivation issue – perception won't learn anything new
- Women not accessing system because of fear
- Complexity of entering system
- Lack of support training education for breastfeeding for mother and providers

<u>Infant Health Issues</u>

- Poor parenting
- Lack of basic childcare
- Transitioning newborn into healthcare system
- Eliminate stigma associated with having a baby
- Exposure to environmental toxins
- Substance abuse
- In home follow-up needed
- Infant Support Services
- Safe sleeping
- Providing cribs
- Child abuse education needed
- Make application forms from FIA more user friendly
- Build on strengths of parents
- Empower families
- Lack of parenting classes
- Education is main barrier. 85 percent of kids dying of SIDS died in bed when there was a crib. Crib death means baby will die in crib
- Follow model of the "Back to Sleep" campaign. If we could eliminate SIDS and sleep environment related deaths in Detroit, infant deaths would be reduced by 50 percent
- Poor literacy of mother
- Lack of immunizations

- Breastfeeding support
- CSHCS – identifying health care needs of LBW, special needs, etc
- Early-On is contact between provider and family. Adopt proven approaches to working with families as partners rather than clients
- Nutrition
- Lapse of time before enrolled in WIC
- When pick up WIC formula, dilute it and don't understand it's a supplement
- Motivation to use available services
- Lack of motivation on the part of the parents
- Mistrust of providers
- Resources for post partum depression/mental health
- Not lecture but partner with parent Equal in terms of care. We're there to support not make them do it
- Get names and numbers of providers who are accepting guarantee letter
- Don't have enough providers in city that will take patients. Need a way to entice them

Work to be Done

Community Assets That Need Improving

- Opportunity to improve cooperation among agencies
- Coordination goes hand in hand with cooperation – duplicating services, need to spread resources wider
- Lack of communication with client given technology of email, voicemail
- Key groups need to meet regularly to problem solve, get feedback, improve system
- Form task force of local agencies
- Pull together all organizations
- Re-establish infant health coalition
- Lack of knowledge of welfare reform; communicate those changes to community so they have knowledge of what's there
- Lots of resources but we're not together or structured to reach an understanding
- Community groups are important component
- Different partnerships going on to see who needs to collaborate
- Grassroots aspect should be brought forward to understand cultural values, etc.
- Faith based community. Tap into it to get information out to people
- Take services into the community rather than they come to the system
- How do we get to those who do not access the system – self-selecting, those who come to providers already want/know where to get care
- Use nontraditional distribution through points already frequented by population, e.g. beauty shops, stores, social clubs, etc.
- Attitude – if you walk in door we help you, rather than you don't qualify

Who in the community can effect change?

- 3 major health systems – HFHS, St. John, DMC
- Consumers
- NAACP
- Political figures have grassroots constituency
- High school intervention. After drop out, how do we reach them?
- Literature distributed in elementary schools to moms
- School system is barrier as relates to family planning/pregnancy
- Identify support system they already use
- Media
- PTA
- Partnerships with popular media – sports, broadcast, VH1
- Community centers
- Churches
- Village health workers
- Take it down to specific community/neighborhood level and use the strengths and social ties that already exist

Motivate political will

- Tie to financial impact
- Constituents involved
- Petitions

- Detroit News Nov. 28 article
- Become more proactive individually. Write letters, call into talk shows, seize any media opportunity, psa's and make them live up to their charge

In conclusion, participants were asked to give emotional statements.

1. Change the mindset of how clients think. They want to help their child. They don't want to call others to ask for anything. Clients need to know they can do for themselves. They need to feel empowered to use their gifts and find value within themselves.
2. Clients are not clients; they are our partners. We will fail if we don't see them as partners.
3. This is about social and economic injustice.
4. When you're in the trenches, it breaks your heart to see teens with second or third pregnancy with no hope of getting out of the hole they're in. No family planning, no future. Have to stop this now. Stop early in life.

Recommendations

Local

1. Establish systems and maintain coordination/cooperation among current programs.
2. Identify and communicate existing community assets.
3. Develop methods of getting information to clients using vehicles that present few barriers and are currently used.

State

1. Consistent policies and consistent funding
   a. More funding/reallocation of funding
   b. Sustain and strengthen Medicaid funding. Increased Medicaid provider access is essential.
2. Guarantee access by making sure we have providers and that they are adequately reimbursed.

Genesee County

Summary of Discussion

The Genesee County workgroup prioritized the maternal health/prematurity and infant health (post neonatal) periods for action. Common themes identified in each of the areas of focus include issues of education, data, health care coverage or lack thereof, provider/client relationship and service integration and/or coordination.

Factors thought to be affecting the maternal health/prematurity period were occupational risks, stress, ineffective intervention focus due to inaccuracy of data, tobacco use, pre-conceptual health and substance abuse. The most significant factors identified were access to care, impact of racism and pregnancy intendedness. Workgroup members emphasized specific barriers to access care such as environment/setting (hours, child care, services located at multiple sites), inadequate healthcare reimbursement, transportation, lack of service coordination, poor communication to clients from providers, alcohol, tobacco, drug use, domestic violence and depression. The impact of racism was reflected in the workgroup discussion with recognition that there is a need to undo racism. Actions of racism, both real and perceived, create many barriers to quality access and utilization of services. Pregnancy intention was the third issue most predominant in the Genesee County discussion. Whether or not an individual intends to become pregnant is much more complex than simply a lack of contraceptive care. The issue that involves factors such as sexual abuse, domestic violence, current attitudes prevailing among teens, cultural considerations, degrees of planning and quality of provider/client interaction.

A variety of issues affect the post neonatal period. The workgroup emphasized the importance of moving beyond just the clinical setting to a more personal approach. Several issues necessitate a more personal approach:

- The limited range of clients' knowledge of maternal/infant health issues (e.g. infant care, signs of medical emergencies, pediatric care options, local resources etc.)
- The lack of MSS/ISS-like services for all pregnant women and infants, regardless of income
- The current model of managed care and medical assignments may be inappropriate for infant care
- Perception of poor coordination with other providers and follow-up of child protective services
- The lack of service integration
- The lack of mentoring services for clients

Another issue thought to detrimentally affect the post neonatal period is the inconsistent, and often inaccurate, data collected when infant deaths occur. While inaccurate death data does not directly correlate with a preventative measure, there is significant potential impact on how prevention measures are identified and implemented.

Issues and Concerns

Several concerns were expressed during the workgroup discussions that have the potential to immensely impact maternal/infant health care in Genesee County. There is a significant lack of awareness of existing services and resources among community residents and professionals. Clearly consumers and professionals alike will not access services of which they are unaware. Transportation is also crucial to maternal infant health care and should be both accessible and acceptable. For example, a pregnant woman with small children is not very likely to use a bus pass if she must walk a number of blocks to the bus stop during inclement weather. The coordination and integration of existing services is not as widespread or comprehensive as it should be, and more effort must be placed on the improvement of communication and collaboration among providers.

Work to Be Done

- Communicate to key leaders the need for comparable and timely reimbursement to Medicaid providers and the impact of the current manner of reimbursement on maternal/infant health
- Utilize the Missing Links and/or Healthy Start Coordination Team to formalize a county-wide effort to improve coordination of professional/paraprofessional services
- Plan a Community Summit to present and exhibit existing maternal/infant health resources and services
- Actively promote and recruit participants for the upcoming Community Dialogue Sessions
- Examine current transportation options for consumers and determine specific gaps and needs
- Continue to advocate for statewide guidelines for Medical Examiners
- Identify existing pre-conceptual health education opportunities and develop recommendations to increase and/or improve those opportunities
- Expand access to Undoing Racism workshops to increase the number of individuals in policy-making, resource distribution and service delivery positions

Recommendations

1. Provide more comparable reimbursement to providers, particularly those who serve the Medicaid population; this will in turn increase the number of providers and improve access for clients
2. Improve the coordination and integration of non-office based health workers with office-based practices (e.g. MIHAS with medical practices) and use faith-based initiatives and forums to serve as an intermediary for providing services
3. Hold a community summit for professionals, non-professionals and residents to improve awareness of maternal/infant health services, resources and providers in Genesee County

4. Continue community dialogue sessions to solicit ongoing input of the community's needs
5. Explore more creative methods to reduce transportation barriers (e.g. more moms-with-small-kids user-friendly modes such as vans rather than buses), and participate in enforcing Medicaid Managed Care requirements for providing transportation
6. Establish statewide guidelines for medical examiners to assure accurate cause and manner of death associated with infant mortality
7. Expand existing pre-conceptual health education and care to improve maternal health prior to conception

Ingham County

Summary of Discussion

The session began with a data presentation by Chidi Arole, epidemiologist, MDCH. In Ingham County, low birth weight babies essentially have remained relatively unchanged since 1990 (7 to 7.7). The teen birth rate was 12.8 in 1990 and is now 11.7. Infant deaths were 12.2 in 1990 and have fallen to 6.0. In 1990, 70.8 percent of women had prenatal care and now the percentage has increased to 90 percent. The Perinatal Periods of Risk Model does not look at deaths less than 500 grams or less than 24 weeks though these are counted in computation of the infant mortality rate. Terminations and spontaneous abortions were also not included. Comparison data is important because you may have three different cities with the same rate and they will have three different causes of infant deaths. For Ingham County, the maternal health and prematurity group were the largest factors in the model, followed by infant health. A public health model may be the best way to determine where the largest impact can be made.

The discussion turned to the Fetal Infant Mortality Review (FIMR) program. FIMR has a core committee with most members being from the service sector. Case data is abstracted and home interviews are conducted and presented to the review team. They then take individual and collective data and present it to a community action team. This team is comprised of people who know who to talk to and how to get things done. It takes time to get a FIMR team up and running and to keep the effort sustained. In Saginaw County, Dr. Ruffin from Saginaw Valley State University established the Saginaw County Infant Mortality Task Force. It met 6-8 months until a few individuals decided to apply for a FIMR grant. Participants wondered what organization would provide data on deaths if a FIMR team were to be established in Ingham County. Theoretically, the public health community will have an active role, but it should be a community effort. Safe sleep data is available if there is not a FIMR program in the community. Medical examiners, law enforcement and especially child death review teams have this information. Clarification was given regarding the relationship between child death review and FIMR. Most child death review teams do not review all infant and child death cases. FIMR, in addition, does a specialized medical review, which includes home interviews. FIMR reviews offer a more thorough case analysis of infant deaths, especially those related to natural causes.

Currently, there are no state funds available for local FIMR communities, but technical assistance is still provided by Michigan Public Health Institute through a contract with MDCH.

Issues and Concerns

- Lack of preconceptional health care services
- Nutrition, stress, etc are not included in adequacy of prenatal care
- Inaccurate data on infant death certificates

- Consider working conditions at mother's employment, infections and weight gain when examining the perinatal period
- Improve data availability for communities
- Need cultural competency among providers
- Prenatal care adequacy only looks at the medical side and not at the quality of MSS/ISS or other support services
- Women with substance abuse and mental health problems are more difficult to reach

Work to be done

- Obtain birth certificate data on all infant deaths in Ingham County
- Examine the racial disparities in Ingham County
- Obtain maternal death data for Ingham County
- Identify key community leaders and emphasize community participation
- Resurrect the political will

Recommendations

1. Improve birth certificate and death certificate validity by educating medical students on vital statistics and proper procedures for filling out forms
2. Establish a FIMR team in Ingham County
3. Enact state guidelines for medical examiners to promote consistency and accuracy in completing death certificates
4. Improve the diversity of providers to prevent cultural bias regarding minority families

Kent County

Summary of Discussion

Maternal health and pre-maturity were identified as the significant areas that related to excess mortality. The importance of having adequate data to address the related issues was a significant part of the discussion. Emphasis was placed on the Fetal Infant Mortality Review project and its importance in providing qualitative data necessary to adequately define and focus on community issues that stand as barriers to optimal outcomes. Time was spent discussing work that had already been done in the Grand Rapids community regarding the development of prenatal care core concepts. Areas included were: education of the importance of prenatal care, assessment of barriers to obtaining this care, assessment of mental health status and the use of harmful substances and assessment of the social support systems of the pregnant woman.

Embedded in the discussion was the understanding of the inability of any single institution or agency to address all related issues. Collaboration and partnership were raised as goals that must be reached if these efforts are to be successful. It should be noted that, within the Grand Rapids community, there exists an organization, supported by the local health department, that has as its major focus the issue of infant mortality and the associated racial disparity (Healthy Kent 2010 Infant Health Implementation Team). Represented on this team are community members as well as 31 institutions, agencies and organizations that have the well-being of women and children as part of their mission. This network provides a basis for the development of collaborating and partnering relationships within the community. The background for our discussion flowed from the work of the Infant Health Implementation Team.

Issues and Concerns

Time was spent discussing policy involving MSS and ISS. Issues included inadequate or lack of funding for transportation and translation services, policy that allows for only one open MSS or ISS case per family, lack of reimbursement for community health workers for home visits and the requirement for a prescription for the client to attend parenting classes. Data issues surfaced, including the lack of a standard definition of fetal death and the need to implement fetal death certificates that contain adequate demographic data. The need for inclusion of race and ethnicity with an allowance for multiple choices was raised. It was also found that Medicaid reimbursement for providers is insufficient and is a contributing factor to lack of access for many women. In addition, it was noted that there are no incentives provided for more and earlier prenatal care.

In more general terms, the Grand Rapids/Kent County community has found that the ability of the community to successfully address the problem of infant mortality with its associated racial disparity depends on different factors. First, there must be a clear understanding of the nature of the issues that impact pregnancy outcome. It has become apparent that the process used in the Fetal Infant Mortality Review (FIMR) provides vital insights by gaining personal, first-hand knowledge of the issues from the mother who has

experienced the loss. The knowledge gained through the FIMR process allows for the application of resources to effect system changes. Second, the ability of the community to create system changes is directly related to the degree to which there is true collaboration and partnering within the community. Effective communication around these issues will occur in proportion to the trust developed. Finally, it was found that, in order to provide effective education to the at-risk population, the message must be delivered to the woman from people she trusts in a comfortable setting. Family members and other support people can greatly influence the mother's decision-making process.

Work to be Done

The following is a listing of the issues to be addressed and the institutions that need to be involved in the process.

1. Education of the need and benefit of early and consistent prenatal care. MDCH, local public health and all providers of care should be involved.
2. Assessment of the ability of the pregnant woman to comprehend information provided in the course of prenatal care. All providers need to be aware of the need for this assessment. Professional societies (ACOG, MSMS, AAFP, MAOP, local medical societies) can play a significant role in this area.
3. Assessment for adequate resources to access prenatal care (financial, transportation, knowledge of available resources and basic human needs). This work starts with direct providers of care but would include local public health through MSS/ISS, WIC providers and other welfare agencies.
4. Accurate documentation of past medical history and thorough assessment of physical health (including dental health). This is an issue for health care providers and will require education as to the importance as well as efforts to streamline these assessments in an office setting.
5. Education of pregnant women and providers as to the importance of exclusive breastfeeding as the best method of infant nutrition. Continue and expand the efforts of MDCH in this effort and engage specialty societies in obtaining provider support for breastfeeding.
6. Assessment for mental health status and prompt referral as indicated. Assure that mental health services are accessible and appropriate.
7. Assessment for substance use and educational efforts to assure that pregnant women understand the risk. Efforts at both the state and community levels will be necessary to achieve this goal.
8. Assessment for social support systems should be done for all pregnant women with referral to appropriate agencies as indicated. Issues of accessibility and acceptability of services will need to be reviewed.
9. Prenatal care must be nurturing, culturally sensitive and non-judgmental. There is a need for communities to directly approach the issue of racism. Provider education relative to racism and culturally sensitive care must begin early in the educational process.

Recommendations

There are two attachments relating to recommendations from the work group. The first consists of policy issues that arose from the work done both at the summit and prior to the summit. These relate to MSS/ISS, data and information issues, Medicaid reimbursement, federal funding and social marketing. The second attachment is entitled *Prenatal Care Core Concepts* that evolved from discussion of the important issues of prenatal care. Within these recommendations lie multiple issues that form a significant component of the work to be done.

Policy Issues
Healthy Kent 2010 Infant Health Team
Grand Rapids

1. Maternal and Infant Support Services Issues
   - The proposed Maternal and Infant Support Services standardized assessment tool is not evidence-based and does not meet individual community needs. A community's ability to develop unique systems of care must be supported.
   - Transportation assistance is insufficient to meet many patients' needs. Reimbursement for cab vouchers allows for no more than a 20-mile round trip.
   - Client's need for translation increases the cost of providing MSS/ISS services. Additional reimbursement should be available for translation services.
   - Intervention by community health workers in addition to professional staff has been demonstrated to improve client's access to the MSS/ISS program, prenatal care and other community services. Additional reimbursement should be available to support community services. Additional reimbursement should be available to support community health worker intervention.
   - Client incentives should be considered as an additional component to the program to encourage participation in prenatal care.
   - Relax the regulations for parenting education to allow better access to reimbursement for parenting classes that are offered in the community.

2. Data and Information Issues
   - Consistent definition of fetal death and implementation of fetal death certificates is needed. Demographic information should be included in fetal death certificates.
   - Race and ethnicity categorization must be clarified on birth certificates.
   - Every birth outcome must be properly documented.
   - Continuation of Fetal and Infant Mortality Review funding is strongly encouraged to allow communities with disproportionately elevated fetal and infant mortality to develop/enhance corrective programming.

3. Medicaid Reimbursement
   - Incentives should be given to prenatal care providers to complete holistic prenatal care assessments that document the multiple risk factors that can contribute to an infant death.

- Reimbursement levels must be improved to provide incentives to providers for earlier and more prenatal care visits.
- The Medicaid application process must be streamlined.
- Dental coverage should be available to clients insured by the non-Medicaid Michcare program in order to decrease risk for pre-term labor for these clients.

4. Federal Funding
   - Five communities in Michigan have federal Healthy Start Initiative funding. The state should advocate for more federal funds or more equitable distribution of funds to allow communities that are most at risk to have access to these resources to provide additional services in their communities.

5. Social Marketing
   - Our community has told us that those most at risk for infant death are unaware of the risk. A statewide social marketing campaign should be put in place to educate about behaviors that contribute to a healthy pregnancy and healthy babies.

6. Welfare Reform
   - Waive Work First requirements for new moms for the first year of the baby's life.
   - Allow for outpatient substance abuse treatment to meet Work First requirements.

Prenatal Care Core Concepts
Healthy Kent 2010
Infant Health Implementation Team

In an effort to decrease infant mortality and morbidity in Kent County, we, the Infant Health Implementation Team of Healthy Kent 2010, believe that all pregnant women should be given the utmost prenatal care, including assessment, education and appropriate interventions. In order to promote and encourage this superior care, we also believe that several core concepts must always be included in a woman's prenatal care. These core concepts are:

1. All pregnant women should be educated about the need and benefit of early and consistent prenatal care. Any agency identifying the pregnancy should facilitate this early prenatal care in their own organization and/or in collaboration with other care providers.
2. All pregnant women should be assessed for the ability to comprehend any information provided in relation to prenatal care. Education should be individualized to the pregnant woman's needs.
3. All pregnant women should be assessed for adequate resources for overcoming barriers to accessing prenatal care, including financial resources, transportation, knowledge of available resources, and basic human needs (food, clothing, housing).
4. All pregnant women should have documentation of an accurate past medical history including previous pregnancies and complications, chronic illness and communicable diseases.

5. All pregnant women should be assessed for their physical health status, including dental health.
6. All pregnant women should be assessed for their nutritional health status, both for themselves and for the infant. Exclusive breastfeeding should be promoted as the best method of infant nutrition.
7. All pregnant women should be assessed for their mental health status, including the presence or risk for depression.
8. All pregnant women should be assessed for the use of alcohol, tobacco and other drugs.
9. All pregnant women should be assessed for their social support systems, including the ability to cope with stress and the presence/history of physical, emotional and/or sexual abuse.
10. All pregnant women should experience care that is nurturing, culturally sensitive and non-judgmental.
11. Information provided to all pregnant women should be accurate, consistent and comprehensive.

In addition to implementing these basic prenatal care concepts, the work group also stated that all women with identified needs should be offered services and resources to ensure the delivery of a healthy newborn.

American Indian Tribes

Summary of Discussion

A total of 23 people participated in the session. Five different Native American communities and the Inter-Tribal Council of Michigan, as well as a variety of national, statewide and local public health organizations were represented. The discussion began with a review of the infant mortality rate and related perinatal risk factors, as well as a presentation of the PPOR analysis. Despite improvements in the past decade, in some areas of Michigan American Indian babies die at a rate that is two-to-three times higher than the rate for white babies. In addition, the incidence of SIDS is three to four times higher.

The PPOR revealed that when compared to the reference population of non-Hispanic white women over the age of 20 with at least 13 years of education, there is excess feto-infant mortality among Native Americans within all weight and age groups. The excess is clearly greatest among the very low weight group (<1500g) followed by the higher weight (≥1500g) in the post neonatal period. The group identified underlying maternal health issues and prematurity as the highest priority for increased intervention, followed by the areas of infant health and maternal care.

In exploring the issues related to compromised maternal health, several themes emerged. The central issue seemed to be access to culturally appropriate and high quality services. The lack of maternal and child health providers and lack of attention to women's health and well-being in general was highlighted. Given the need for attention to comprehensive women and infants' health, incorporating midwives and a midwifery model of care was repeatedly mentioned as an effective service delivery strategy, especially for isolated rural areas. Other specific issues related to access problems that were identified included differential treatment of clients with Medicaid versus private coverage, lack of cultural competency among service providers, distrust of services within the community due to previous poor treatment, and perceived discrimination. The group agreed on the need to support community and family empowerment by facilitating opportunities for mentoring and peer support, building on Native American traditions and community strengths. Tribal clinics and tribal organizations were agreed on as the most acceptable and successful venues for reaching and engaging Native American people.

There was also acknowledgment that the resources and systems of care differ in each area of the state, which has a significant Native American population. For example, the access problems in Grand Rapids are of a different nature than the access problems in the western Upper Peninsula. Each Native American community also has its own history, and unique community assets. For this reason, it was recommended that a needs assessment be compiled for each community, expanding and updating the inventory of perinatal services that was completed for seven tribal communities by the Inter-Tribal Council of Michigan Healthy Start Project.

Issues and Concerns

1. Shortage of providers, services and facilities
   - There is a chronic shortage of providers in most of the rural communities where tribes are located.
   - Rural communities lack access to: mid-level providers (certified nurse-midwives, pediatric, family, and/or women's nurse-practitioners, physicians-assistants); perinatal specialists (obstetricians, pediatricians, neonatologists, perinatologists; and perinatal specialty care facilities (neonatal intensive care units, perinatal emergency care and surgery, high-risk pregnancy care, regional referral centers).
   - People living in rural communities must travel long distances to access primary care services and lack access to universal 911 emergency services.
2. Life context that impacts health status
   - There was agreement within the group that the greatest impact on health status among Native Americans is the conditions of everyday life, such as poverty, housing, education, violence, unemployment, transportation, and racism.
   - Most tribes are located in isolated rural communities and many American Indians lack a medical home.
3. Service system related issues
   - Native American women and families receive perinatal care at a variety of settings: tribal clinics, private physician, midwife clinics and public clinics. Group participants reported a high level of mistrust and discomfort with private physician practices. Group participants reported that Native American people would like to access a greater portion of their care at tribal clinics, which are seen as less intimidating and provide a medical home, sense of continuity and less fragmentation of their healthcare.
   - Participants stated that there is a perception among Native Americans that the quality of health care services provided at rural locations in the Upper Peninsula is inadequate and unsatisfactory, and that in many cases small hospitals provide inferior care to that of larger regional centers.
   - In terms of client satisfaction and choice of providers participants stated: There is a preference for midwives and a desire for increased utilization of midwives because of the particular kind of care that they provide, which is perceived to be individualized, caring, respectful, informative, culturally sensitive, safe and cost-effective. Group participants relayed stories of discriminatory treatment by physicians and hospitals of clients whose care is covered by Medicaid vs. private insurance. In particular, in the Upper Peninsula, nurses present in the group reported that physicians routinely will not accept new clients for initial prenatal care appointments until after the 13th week of pregnancy, a clear violation of standard practices and recommendations that prenatal care should begin within the first 13 weeks. Reported explanations heard from area physician practices include "needing to save visits for the end of the pregnancy" (Medicaid reimburses a flat rate per pregnancy no matter how many prenatal care visits the women receive) and "with the high miscarriage rate, the need to avoid wasting the time on a prenatal work up."

- Healthy Start nurses are highly valued in the tribal communities and they increase access to perinatal care and education.
- Participants stated that issues that create barriers when seeking perinatal care include: perceived discrimination and racism, inability to get timely appointments with physician providers, problems with using Medicaid, lack of culturally competent resource materials and communication styles, lack of awareness on the part of providers of cultural values, beliefs and health-seeking behaviors.

4. Cultural issues
   - Participants stated that there is a desire for more traditional Indian healing practices and practitioners to be used in collaboration with contemporary medical providers.
   - Participants agreed that "Accessibility does not mean acceptability."
5. Empowerment/ Building on strengths
   Several issues arose related to the concept of "building on the strengths and traditions that *we do have* in Native American families and communities." Discussion topics included:
   - Because there is an historical and valued base of knowledge and wisdom within native communities, especially among the elders, there was broad support for training indigenous women to care for one another.
   - Peer counseling and education was considered important.
   - Using the traditional format of the Talking Circle would enable women to get together and talk, which was considered very important among group participants, particularly in the areas of self-care, body-image, nutrition and breastfeeding.

Work to be Done

The primary way this work is to be accomplished is through partnership between tribal health programs, the Michigan Department of Community Health and legislative committees that address maternal and child health issues. In short, tribes must be brought to the table as full partners in addressing infant mortality. Working with the tribes and endorsing them as MSS/ISS providers, Medicaid and MIChild enrollment sites will be the most effective strategy to increase both access to and the quality of program efforts.

Collaboration between MDCH and tribal Health authorities can be coordinated through the Inter-Tribal Council of Michigan and through the Inter-Tribal Council of Michigan Healthy Start statewide consortium.

Recommendations

1. Work with tribes as full partners to address Native American infant mortality.
   - Continued collaboration and communication between MDCH and the Inter-Tribal Council of Michigan will address issues of fragmentation of services and barriers to care.
   - Working through established infrastructures of tribal health departments at tribal clinics will increase access to a wide array of services such as Medicaid and MIChild.

2. Aggressively pursue changes in perinatal systems across the state that will improve the quality of and access to effective healthcare services that will improve outcomes for Native American populations.
    - Recognize that women's and perinatal health are intrinsically tied together; examine perinatal health within the context of women's overall health recognizing the conditions of everyday life that impact it.
    - Facilitate the development of racially and culturally competent primary health care policies and structures for Native American populations. Initiate multicultural work groups within communities to design a blueprint of culturally, racially and linguistically competent primary health care for Native Americans.
    - Utilize complementary models of care that are effective, safe and satisfying for Native Americans, such as traditional American Indian healing practices.
    - Develop a plan to utilize midwives as primary perinatal care providers. The midwifery model of care is safe, satisfying and cost-effective, minimizes technological interventions, increases access to first trimester prenatal care and identifies and refers women who require obstetrical care. Midwifery care addresses social, cultural, psychological, ethical and political aspects of pregnancy, birth and parenthood.
    - Explore increasing Medicaid reimbursement to providers, including advanced nurse practitioners and certified nurse-midwives, to guarantee access to early and adequate prenatal care.
    - Find ways of ensuring availability of maternity care providers in outlying and rural areas of the state.
3. Explore lifestyle choices within the context of family and tribal communities.
    - Involve Native American women in creating incentives for making healthy lifestyle choices.
    - Use empowerment models to combat internalized oppression.
    - Offer community-based educational opportunities.
    - Teach woman and families how to be good consumers of health care.
4. Support funding for tribal participation in county, state, and national maternal child health initiatives and provide resources for public education and information campaigns, such as federal Healthy Start, MIHAS and MSS/ISS.
5. Implement comprehensive health data collection for minority populations to assess and monitor health status. Implement staff training and racial reporting protocol changes, which will result in an increase in the correct identification of Native Americans on health and vital record data collection forms.

Oakland County

Summary of Discussion

In Oakland County, low birth weight and preterm delivery rates have been getting worse over the past 10 years. The number of live births to teen mothers has improved (a decrease of 25 percent) over the past 10 years. Child mortality has decreased over the past 10 years (by 25 percent) but remains poor. Adequacy of prenatal care has remained pretty stable. WIC program participation (participation/target base caseload) has increased over the past six years from 88 percent to 94 percent. The fetal death rate appears to be increasing.

In the City of Pontiac, 20 percent of births are to teen moms versus 4 percent in Oakland County overall. Less people have adequate care and more have less than adequate or inadequate care as compared to Oakland County as a whole. More low birthweight babies are born in Pontiac than the rest of Oakland County. Of mothers who smoke, 22 percent of the births were low birthweight in Pontiac compared to 10 percent in Oakland County. About 14 percent of births are premature in Pontiac versus 9.8 percent in the remaining part of county. Nineteen percent of women who had a baby in Pontiac reported smoking behaviors versus 7.9 percent in the rest of county. However, only 0.9 percent of women who had a baby in Pontiac reported drinking behaviors versus 0.8 percent in the rest of county but this is unreliable due to underreporting. The infant mortality rate is 18.8 per 1000 in Pontiac versus 4.0 in the rest of Oakland County. The black IMR is 24.8 in Pontiac versus 13.2 in the rest of Oakland County whereas the white IMR is 13.8 in Pontiac versus 2.9 in the rest of Oakland County.

The characteristics in Southfield look better than Pontiac but are worse than Oakland County as a whole. The *Right Start in Michigan* reports that Southfield has a low incidence of births to teens, mothers receiving late or no prenatal care, mothers who have less than 12th grade education and mothers who report smoking or use of other drugs.

In 2000, Oakland County had 31 excess black infant deaths. A review of infant deaths in Pontiac in 2000 showed that 12 of 18 deaths reviewed by Oakland County FIMR were related to prematurity; most others were related to positional asphyxia. There is a need to identify the factors that contribute to prematurity and the degree to which these factors contribute to infant mortality (e.g. identifying critical cut-offs related to smoking, weight gain, drug use, infections, etc.)

There are ongoing concerns about data used to monitor and inform health practitioners and policy-makers about health services: is the data sufficient and is it captured in an adequate way? A review of data collection methods and data coding issues are necessary. Also, the need for more data identifying participation of the father and standardization of the race of individuals on birth/death certificates is necessary. It is also very important for those using the data to understand how it is collected and reported, whether by birth or death cohorts.

A FIMR program is underway in Pontiac and has formed in Southfield to review all infant deaths in those jurisdictions. Such data should drive political will and social action. Factors present (P) and contributing factors (C) were tallied at the Pontiac FIMR. Eight major factors were identified that need to be addressed: use of alcohol, tobacco, and other drugs, domestic violence, fragmented antepartum care, under-utilized support services, premature delivery and low weight births, positional asphyxia, post natal care and follow-up, and preconceptual planning and care (which includes teenage pregnancies).

There are concerns about communication between the health providers, i.e., hospitals, physicians, and other health providers, so that risk factors can be identified and interventions can be initiated. There are cases where a woman may have several admissions to the ER (in the same hospital, with health providers not being aware of it), or at different points of service. Any type of pregnancy or infant loss (abortion, miscarriages, fetal deaths etc) appear to be predictors of future infant loss, therefore clients should be referred for services so that preventative measures can be put into place.

Health and social service professionals must conduct better assessments. Sexual abuse (especially among teens), drug screens (anyone in preterm labor should have a drug screen), domestic violence, sexually transmitted diseases, drug history, fathers history, vaginal infections, are among some of the areas to screen for. These are social issues with health consequences. Pontiac is a part of Oakland County and should be recognized as such. Every county except for Jackson has become more segregated in Michigan. Racism at all levels perpetuates and contributes to disparities. These topics are not comfortable to face and discuss.

There is a need for greater cultural sensitivity due to racism and stressors faced by certain segments of the community. In Southfield some women reported that although they had initially gone to prescribed medical appointments, they felt invisible, and had not received what they needed. This contributed to poor compliance with future health appointments. We cannot expect improvements when programs are being cut – we need commitments to resources that are not grant-funded but would be on going.

Solutions are tied to community-based assessment and the effective coordination of services. The community must be educated as to the disparities that exist in the community. The community must be involved in the design and planning of services. They must be asked about the services they feel they need, and about solutions, which might work for their community (such as having women who have had children mentor women who have not had children, e.g., the pastor's wife, Aunt Sadie, and the use of parish nurses.)

Health messages must be coordinated and clear, as mixed messages are confusing. Bed-sharing is one example of a topical area where the health community has not reached clear consensus.

Issues and Concerns

The PRIME partnership is developing strategies specific to the three most common issues related to infant mortality in Pontiac as determined by the FIMR process. PRIME serves as the Community Action Team for Pontiac. A similar group is needed in Southfield. However, a larger representation of groups must come together across agencies and community groups to coordinate and collaborate on initiatives targeting the racial disparity in infant mortality in Oakland County. It is important to see that political representatives are involved in the process.

Work to be Done

1. Continue collecting community assessment data through the FIMR process and assist the Community Action Teams to implement recommendations developed by the Case Review Team.
2. Complete and implement the planned marketing campaign to better educate the community of the problem.
3. Enlist strong leadership from the medical community to reach peers and provide a voice that can be the catalyst for needed change in policies and agency or hospital protocols that are not client friendly and culturally sensitive.
4. Investigate the projects in Kalamazoo, Detroit and Genesee County to explore which of the strategies they used can be adapted to key communities in Oakland County.
5. Since Oakland County drives the business and economy of the state and promotes Automation Alley, it is the home for corporate headquarters for Daimler-Chrysler, K-Mart, Kelly and many other business and technology leaders. Representatives from some of these companies should be invited to participate in work groups to plan strategies to improve the overall quality of life for all residents in the county.

Recommendations

1. Support the premise that data collection drives the interventions.
2. Broaden the definition of policy-makers.
3. Entitlements for basic health services should be continued, enhanced and advertised.
4. The Peer Education model should be actively promoted.
5. Constituents should be able to access immediate enrollment into health programs and services at any point.
6. Incorporate education (parenting and women's health) into prenatal care.
7. Promote one clear message of importance of infants sleep position and bed-sharing.
8. Improve the time of the Medicaid and HMO reimbursement to providers, as well as reimbursement for the adequate number of prenatal visits.
9. Use the media to inform the public of the large disparity in their county.
10. Get the Oakland County politicians involved. Tell them that the public will be educated about the issues and remind them that Pontiac is a part of Oakland County.
11. Train the medical community in the importance of cultural sensitivity.

Saginaw County

Summary of Discussion

The Saginaw community has one of the longest running Fetal Infant Mortality Review (FIMR) teams in the country. This is a huge advantage for the community in that FIMR identifies the factors contributing most to our infant deaths.

While the Perinatal Periods of Risk (PPOR) model does provide a snapshot into the areas for improvement in perinatal systems, the group felt that a disadvantage of the model is that it does not look at cause of death, it uses birth certificate information which may be inaccurate and it does not include the very low birth weight infants (under 500 grams) for either infant or fetal deaths. A significant number of Saginaw's infant deaths are in the pre-viable category, less than 500 grams, particularly the black infant deaths.

Saginaw County has a larger percent of blacks than the state of Michigan (26.4 percent of the county's population). The adequacy of prenatal care has improved over the years in Saginaw and the percent of births to teens is going in the right direction. Low birth weight continues to be Saginaw's primary concern (71 percent of the excess mortality) as the major contributor to infant mortality. Saginaw's post-neonatal death rate is significantly higher than the State of Michigan, (2.1/1000 compared to .9/1000). Twenty-one percent of excess mortality in Saginaw is post-neonatal.

Assets

- Presence of a regional NICU
- An antepartum specialized care unit
- Committed community partners
- Excellent community resources
- An already existing Infant Mortality Coalition
- MIHAS program functioning
- Healthy Start grant
- FIMR ongoing for past 10 years
- Presence of medical education communities in Saginaw (Delta College School of Nursing, SVSU, SCHI & OB residency program)

Barriers

- Community has grown complacent
- Ignorance and lack of knowledge (by the public and providers) that an IM problem exists: poor understanding of the racial disparities
- Poor nutrition and overall health status of the population (high number of smokers, obesity)
- Lack of good public transportation and resources for transportation
- Inability of providers to reach and access the target population
- Limited number of committed leaders (same faces at all the meetings)
- Racism.
- Lack of social support in families
- Lack of cultural sensitivity among providers, agencies
- Lack of collaboration: agencies don't know what other agencies provide
- Lack of coordination of services, no one to market support services

- Few resources to certain populations
- Mistrust among providers, agencies
- No involvement from faith based organizations
- Still see some births with no prenatal care
- General population does not have knowledge of ***choices*** in health plans
- No universal screening during prenatal care for domestic violence or substance abuse
- No preconceptual care, especially for teen and young adults
- Too few pediatric Medicaid providers
- Economic opportunities declining in Saginaw

Issues and Concerns

1. Community needs to increase involvement from a more diverse and committed group of people. Infant mortality is multifactorial; non-traditional partners have to be recruited and involved. (City and county government, businesses, medical reimbursement companies, CEO's)
2. Advocacy is needed from the provider community.
3. There is need to focus and locate resources where the problem is.
4. "Turfism" and "empires" preclude coordination of services.
5. The high post-neonatal death rate has to be addressed. An alarming number of the infant deaths in Saginaw are totally preventable, suffocation due to overlay by bed-sharing adults (12 percent of infant mortality in Saginaw, and 40 percent of post-neonatal mortality.)
6. Health education to the general public needs to be enhanced.
7. Maternal health issues leading to prematurity and low birth weight need to be a priority.
8. Psychosocial issues such as domestic violence, substance use and abuse are not being consistently assessed or addressed (inadequate screening, not enough prevention services.)
9. A perception problem remains in the Saginaw community. The public and providers are not aware of the magnitude of the infant mortality problem and the large racial disparity.
10. Unplanned/unwanted pregnancies help drive the large number of infant deaths in Saginaw. Women who are poorly committed to the pregnancy are unlikely to get adequate prenatal care and engage in healthy behaviors to ensure a positive outcome.

Work to be Done

In this community, infant mortality was a high priority in the early and mid 90s. Today some of this momentum seems to have slowed and Saginaw has lost a little of the ground gained. The last three years have seen some dramatic changes in leadership in the community, the merger of two hospitals to form one major health system, changes in administration at the local health department and differences in philosophy. The work to be done includes increased attention to maternal health issues, infant health issues and rebuilding some of the partnerships, coordination and cooperation among programs and service providers. Presence of the federal Healthy Start grant through the Saginaw

Department of Public Health assures that resources will be available for at least the next four years for this community.

Recommendations

Local

1. Comprehensive community and provider education on issues contributing to infant mortality. Include contraception, family planning, pregnancy spacing and safe sleep. Also target grandmothers and matriarch care givers to address generational issues.
2. Undoing racism efforts:
    a. Increase the number of black providers.
    b. Insure culturally appropriate services at all levels, all those who come in contact with moms from the physician to the nurses, social workers, dieticians, para-professionals, support staff and reception personnel.
    c. Community funded education and scholarships for black students who choose health and human service professions.
    d. Increase awareness for the problem through Healing Racism programs community wide.
3. Compile a map or directory of support services available in the community for provider use and to aid in coordination and case management.
4. Present a unified message on Safe Sleep recommendations.
5. Develop incentive programs for moms and families to increase adequacy of prenatal care and engage those in need of support services.
6. Consider coordination and possible merger of infant mortality reduction efforts. Currently three separate entities work on the problem: Saginaw County Infant Mortality Coalition, the Healthy Births subcommittee of the Human Services Collaborative Body and Healthy Start management team and Consortia.

For State and Policy Makers

1. Maintain and restore funding for local programs engaged in surveillance and prevention. Communities need data to shape and drive perinatal initiatives.
2. Quantitative data available through the state vital statistics department needs to be released in a timely manner, but the qualitative data and the women's stories are the needed component for communities to make changes in their systems of care.
3. Realize that policies and funding need to be long term, consistent and sustained.
4. Need guidance from the state health department on a unified Safe Sleep message. There is too much controversy and differing approaches on appropriate education to families. Approach should be *risk avoidance* rather than *risk management*.
5. Encourage appropriate provider reimbursement for screening and treatment of psychosocial issues such as domestic violence, substance use and abuse.
6. Expand eligibility of support services such as MSS/ISS to include women who have experienced an infant, fetal or pregnancy loss.

Washtenaw County

Summary of Discussion

- Need data by race and zip code
- Identify community resources and promote them to the public.
- Identify what contributes to most infant deaths; what are the commonalties in each period of risk.
- Obtain input of consumers: currently the African-American Coalition.
- This is a social issue, not just a health issue.
- The system does not support change. Need education of all system stakeholders.
- What is going on between the client and the caregiver?
- Assess training, cultural competence, burnout, family centered care and design of educational programs.
- There needs to be a change in our culture that supports women and children.

Assets

- HIP group
- African American Community
- Child Death Review team
- Seeking a grant to establish a FIMR
- Hispanic outreach worker at the LHD
- Word of mouth across cultures and within populations
- Board of Commissioners
- Allocate dollars for Child Well-Being
- Have adopted the HIP goals
- U of M and St. Joseph Health Systems
- School of Public Health, which could be more active
- Dads and extended families
- State legislatures, when fully informed
- Faith Based Organizations
- March of Dimes
- WIC

Barriers

- Data
- Duplication of services: fragmentation; lack of coordination
- Lack of information of what is available in the community
- Role of local government: city, township, and villages
- Loss of funding for adolescent and school based health centers (The Corner)
- Communication: both internal and external
- Funding: tobacco settlement dollars for health
- Access to mental health services, particularly for maternal depression

Issues and Concerns

- Infant mortality rate for blacks in Washtenaw County is higher than in Detroit.
- Maternal depression is one of the main concerns to pregnant women: isolation and lack of social support network.
- Access to care for medical, social, and emotional care
- Medical coverage for women outside of pregnancy
- Change in the perinatal care system
  - Look at a new theory of providing perinatal care in groups.
  - Mentoring
  - Preconceptual care and family planning
  - Home visiting programs
  - Alcohol and substance abuse treatment centers

Work to be Done

Concerns were raised about the validity of data. We need more accurate data. The players need to be identified in the community. The FIMR team needs to be funded and its findings should be used to develop prevention plans. The disparity in Ypsilanti is the focus.

Recommendations

1. Who should be the stakeholders?
   - MPCB
   - HIP
   - U of M: public health, social work, student /staff (as volunteers)
   - City government
   - Faith Based Organizations and congregations
   - CBO's
   - Managed Care Organizations
   - MSU Extension
   - Media
   - Police Departments
   - School Districts
   - ISD ASEP grantee
   - Consumer Coalition and leaders; women outreach workers
   - Chelsea Community Hospital
   - St. Joseph Hospital
   - Courts-family
   - Eastern MI U
   - Safehouse Domestic Violence Shelter
   - The community foundations
   - Civic organizations
   - African American fraternities and sororities
   - Professional organizations: doctors, nurses, social workers, etc.
   - Food Gathers
   - Corporations
   - Work First

2. The state
    - FIMR
    - Early prenatal care: Managed care providers - no incentive to get more visits and quality standards not working
    - Female and maternal health: childcare access and affordability
    - Newborn standards of care: implement ACOG recommendations.
    - Better access to Medicaid:
    - More OB/GYNs, midwives, nurses
    - Keep meeting / Keep issue at the forefront
    - Technical assistance: local data runs and trends
    - Sustained money and support for early prevention and intervention
    - Evaluate the impact of Work First on health and maternal outcomes
3. Locally
    - Keep meeting
    - Educate consumers about their rights
    - Educate candidates and newly elected officials
    - Take consumer input to feed understanding

Out-Wayne County

Summary of Discussion

Twelve persons attended the workgroup including representatives from managed care organizations, the local health department, a health care system, a mental health agency, three community organizations (including an Arab-American organization), and a federal governmental agency.

Prior to the meeting, the epidemiologist prepared a Perinatal Periods of Risk (PPOR) Analysis using 1999 data that indicated there were two areas of concern in Out-Wayne County. The model showed the highest proportion of excess infant deaths in the post-neonatal period. Interventions for decreasing deaths in this period focus on infant health. The second highest area is the period from conception to birth, which can best be addressed by interventions focused on maternal health.

There was also a large discrepancy in the 2000 IMR for black and white infants (black: 20.3/1,000 live births; white: 5.1/1,000). The black IMR in Out-Wayne County is higher than that for Detroit (20.3 versus 16.2/1,000 live births).

The final available data was elicited from participants who were members of the Wayne County FIMR. This data indicated that the major causes of infant death were overlying or other family conditions that created unsafe living environments (e.g., substance abuse, unsafe child care practices, family violence).

Because the highest area of risk was postneonatal infant health, most of the discussion in this workgroup centered on care-giving practices, parental mental health issues like perinatal depression or substance use, environmental cigarette smoke and safety issues such as car seats or smoke detectors. Since most of these issues are also related to underlying neighborhood conditions of poverty, poor educational opportunities and differential treatment of people of color, these neighborhood conditions were also addressed as factors that contributed to the high infant mortality rate among black infants in Out-Wayne County.

In the discussion of maternal health, much discussion focused on ways to encourage early entry into prenatal care, address maternal mental health issues like depression and substance use (including smoking of cigarettes) and to give adolescents more opportunities to obtain at least a high school education. The importance of providing care in a culturally appropriate manner (e.g., decrease language and other cultural barriers) and at a time that women who live in poverty are available (e.g., evenings and weekends) was also discussed.

Issues and Concerns

Infant Health

1. Major causes of infant mortality in the post neonatal period are:
   - Overlying (overweight, alcohol)
   - Breastfeeding women (fall asleep)
   - Shaken baby (not know how to deal with crying, developmental issues)
   - Economic issues: lack of crib (many sleep in same bed), car seat, partner caring for baby while mom at work
2. System issues: Many referrals for child abuse and/or neglect are not followed up
3. Health care for infants:
   - ER vs. preventative care (e.g., well-baby)
   - Over half do not come in for managed care that is available
   - Access to care including transportation, the number of physicians available, the waiting time to get an appointment and cultural appropriateness of care (language, appropriate providers e.g., Arab-American women need women providers)
4. Parenting education:
   - Availability of parenting classes.
   - Other avenues to obtain this information (e.g., home visits)
   - Knowledge of how to evaluate adequacy of care providers
5. Nutrition (Education and breast feeding)
6. Back to Sleep is not as effective for the black community
7. Maternal emotional health (depression, self-esteem, substance abuse and violence).
8. Home safety: This includes electrical outlet covers, infant gates, lead, fires, leaving children alone, using space heaters, unsafe neighborhood with bars on the windows that cannot be removed in the event of a fire and accidental poisonings.
9. Environmental smoke

Maternal Health

1. Education:
   - Girls need to stay in school and have objectives other than getting pregnant (reference group for Periods of Risk Analysis is women 13+ years of education.)
   - Preconceptual education on nutrition, planning ahead and lifestyle choices
   - Primary care providers (e.g., MDs, PNPs) need education to help girls avoid pregnancies.
   - School is place to learn about planning, nutrition, emphasize abstinence, etc.
2. Planned vs. unplanned pregnancy:
   - Adolescents see pregnancy as glorified. We no longer send the message that "our family will support you this time, but getting pregnant again is not acceptable."
   - Older women who get pregnant as a way to have control over their lives
   - Self-esteem issues
3. Access to care:
   - Care must be culturally appropriate (see 3 under Infant Health).
   - Insurance issues
   - Many women believe they don't need care if they already had a baby and it was ok - "I will know if something is wrong."

4. Maternal stress such as unemployment, lack of social support, abuse/family violence, alcohol or other substance abuse, homelessness, feeling disenfranchised, racism and lack of opportunities
5. Emotional well being of mother:
   - Depression
   - Substance use to self-treat depression, anxiety, etc.
   - Perinatal loss
   - Deliberately getting pregnant
   - "I will make life better for this baby than it was for me."
6. Cultural issues:
   - How can we key into the positive aspects of the community without glorifying pregnancy?
   - Why are there disparities in black vs. Hispanic outcomes?

Work to Be Done

1. Develop community/business/health care partnerships to address these issues.
   - Develop a strategic plan with involvement from all key stakeholders (business, health care providers, managed care organizations, advocacy groups, faith based groups, ethnic groups and the education system).
   - Include phases and action steps in the strategic plan.
   - Create time lines and show results.
   - Keep involved: meet 3 - 4 times/year.
   - Report on progress at least once a year in a combined meeting/forum.
2. Identify and apply existing resources.
   - Identify and apply evidence based practices/best practices.
   - Recruit volunteers from the community (e.g., retirees, family community service projects).

Recommendations

<u>Local</u>

1. "Strive for 13+": The reference group for the PPOR analysis was women with 13+ years of education. In order for Out-Wayne County to have an infant mortality rate that approximates the goal of Healthy People 2010, it is believed that we must strive to achieve a minimum educational level of at least high school graduation for our adolescents.
   - Find ways to promote the positive aspects of the culture of the community (e.g., extended family support) without glorifying pregnancy among teens. Send the message that "getting pregnant again is not acceptable."
   - Increase collaboration among community organizations and health care agencies to rid local neighborhoods of drugs. Community based coalitions should address the questions, "How do drugs get into our community? Why do they stay there?"
   - Encourage the state to keep school-based health clinics open. These clinics help reduce absenteeism, provide a safe and accessible way for adolescents to get health

care. In one Wayne County school with a school-based health clinic, the teen pregnancy rate was reduced significantly.

2. Give babies mothers who are physically and emotionally available: Women who live in poverty, are depressed or use substances are not available to their children. Working in multiple jobs with minimal wages results in chronic stress and contributes to depression. These women are not physically or emotionally available to their children, and may leave their children with unsafe people while they go to work. All of these conditions contribute to postneonatal infant mortality and also interfere with intellectual and emotional development of young children.
   - Help mothers evaluate childcare providers. Give mothers options other than leaving the child with a partner or relative who does not have the skills needed, but who will provide care free of charge.
   - Address perinatal depression by improving screening and referrals for treatment.
   - Develop community coalitions/partnerships to promote economic parity for all families.
   - Develop community coalitions/partnerships to eliminate illicit drugs from the community
3. Assure access to health care for all families.
   - Address issues that are barriers to care such as transportation, the number of available physicians and the waiting time to get an office appointment.
   - Address cultural appropriateness of care including language and appropriate providers (e.g., male vs. female providers).
   - Encourage women to make use of managed care that is available to them.
   - Encourage the state to keep school-based health clinics open.

<u>State</u>

1. "Strive for 13+".
2. Keep school-based health clinics open
3. "Give babies mothers who are physically and emotionally available".
   - Address substance abuse by allowing substance abuse treatment to be an option for meeting welfare-to-work requirements.
   - Address perinatal depression by improving screening in primary care clinics and services for treatment in Community Mental Health.
   - Eliminate illicit drugs from the community.

Summary of Issues, Concerns and Recommendations

Mobilizing community and state resources to tackle the problem of infant mortality requires consideration of the wisdom from many sources. The epidemiological perspective provides population data to help understand the problem. The witness of direct service providers provides a passionate plea for quick attention. Public health experts review the value of existing programs to resolve the problem. And program administrators and professionals tell the story of what's happening now.

The solution cannot be found in one approach, but will involve many, many community-specific targeted strategies. Hence this summary of issues and concerns generated by summit participants is complex, and divided into several areas of focus.

This report is a summary of what summit participants perceive as issues and concerns that need to be addressed. An appropriate next step is for the Michigan Department of Community Health to determine the accuracy of the perceptions, issues and concerns raised and consider the recommendations. Many of the recommendations have potential policy and financial implications. State government will need to determine what is practical and cost effective in approaching this complex issue.

Identified Issues and Concerns

Data Analysis:

- State and local data analysis revealed that infant deaths occur predominantly because of factors related to the Perinatal Period of Risk associated with Maternal Health and Prematurity.

- The population data shows that black babies are disproportionately affected by infant mortality, especially related to low birthweight, prematurity and SIDS.

- Some communities are experiencing a rise in black infant deaths since 1994-95 without a clear reason indicated.

- The inaccurate recording of American Indian race in vital health statistics and the small numbers mask the true problem in this minority population.

- The inconsistency in determining cause of death for infants, particularly related to when and how death scene investigation is done, affects data interpretation and development of effective prevention strategies.

- Lack of information on fetal deaths hampers the investigation of the larger population affected by low birth weight and prematurity.

Health Care:

- Limitations of the availability of health insurance negatively impact women's access to preconceptional care and entry to prenatal care. Despite recent policy improvements in timeliness of applications for Medicaid and assignment of medical homes, these issues are still often perceived as barriers to care.

- Obstetric providers and specialty care are reported to be either limited or not available in rural areas of the state.

- Timely availability of transportation to a health provider and the availability of childcare continue to limit access.

- Services targeted to specific groups, such as teens and ethnic populations are limited.

- Support services**,** such as Maternal Support Services/Infant Support Services, Maternal Infant Health Advocacy Services, and local Outreach Workers that help identify links to care for pregnant women, need to be more readily available and better targeted.

- Screening and referral to services for known risks to positive birth outcomes such as mental health, genetic counseling, domestic violence intervention, substance abuse services, and dental care need to become routine. Language and cultural translation services are also needed.

- The lack of cultural competency in providers limits their acceptability to many at-risk families. "Accessibility does not mean acceptability."[1]

- Lack of coordination among providers and communication to and with clients hampers access.

Associated Risks for Infant Mortality:[2]

- Racism and real or perceived discrimination negatively affect health seeking behaviors.

- A large proportion of infant death is associated with unintended pregnancy.

- Screening for use of alcohol, tobacco, illegal drugs and domestic violence is not consistently performed by providers interacting with women during pregnancy, leaving large deficits in identification of these risks. There is also a deficit of intervention programs for those with substance abuse.

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1 Source: Geradine Simkins, RN, CNM, MSN, Inter-Tribal Council of Michigan.

2 Associated Risks for Infant Mortality is a phrase used by FIMR teams to indicate health behaviors that are common among women and families who have experienced an infant death.

- Maternal depression is a problem that needs clearer definition and recognition of its impact on infant health and safety. Screening and treatment are largely unavailable.

- The life context of the at-risk population has the greatest impact on health status. Poverty, housing, education, violence, unemployment, transportation and isolation are all highly associated with poor pregnancy outcomes.

- Many communities are finding that unsafe sleep arrangements are correlated with sudden infant death.

- Referral for child abuse and neglect are not followed up adequately.

Knowledge Deficit:

- Public understanding of good health care practices for pregnancy and parenting is a problem in many communities.

- Mentoring assistance to improve knowledge needs to be more readily available. Effective education must be delivered in a comfortable setting from people who are trusted.

- Families report significant lack of awareness of local services and resources.

Motivation:

- "If the heart of the community is not in it, the rest is of little merit."[3]

- "Change requires a combination of data, a plan and political will." "Most systems do not support change. Infant mortality is a social issue, not just a health issue."[4]

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3 Source: Arthur James, MD, Obstetrician/Gynecologist, Kalamazoo, Michigan
4 Source: Bill Sappenfield, MD, MPH, Medical Epidemiologist, CDC, Atlanta, GA

The 2001 Infant Mortality Summit proceedings reflected the current status of data analysis regarding infant death, the available information on access to health care, the growing information on behavior associated with infant death, and the prevailing lack of knowledge and motivation that exists to facilitate a change in health systems.

The state and local communities alike were challenged to initiate strategies to facilitate improvement in the health status of infants and families.

The Recommendations

Local communities must be encouraged to:

1. Develop Fetal-Infant Mortality Review (FIMR) teams.
2. Utilize Child Death Review and/or FIMR teams to dialogue with county medical examiners concerning consistency of cause and manner of death.
3. Facilitate prenatal care in the first trimester for all pregnant women.
4. Support traditional or cultural practices to enhance contact with health care.
5. Support community based health care settings, programs and resources that are more easily accessed and/or acceptable to at-risk populations.
6. Develop and distribute community resource directories to make consumers aware of where to go for help.
7. Provide mentoring and support, outreach and advocacy at the community level utilizing indigenous health workers and faith-based initiatives with the goal of building relationships and trust.
8. Utilize techniques that work for outreach such as: “house-to-house activities,” billboards and bus boards.
9. Foster MSS/ISS type services, including outreach workers as part of the team to improve the cultural competence and ability to engage families in health care.
10. Improve local provider knowledge and promotion of preconceptional health care issues.
11. Establish dialogue with community partners about the presence of racism in health care sources, developing awareness campaigns, and motivating the community will to discourage the practice of racism.
12. Encourage the comprehensive assessment of risks due to sexually transmitted disease, substance abuse, smoking, domestic violence, depression, social support, sexual abuse, housing, employment, transportation, etc. by all local providers perhaps as a local hospital delivery policy.
13. Schedule community dialogue to raise the awareness of consumers, policy makers, and providers of infant mortality issues and facilitate strategic planning.
14. Develop local community/business/health care partnerships to broaden the number of key stakeholders.
15. Develop systems to provide transportation and child care to women seeking prenatal care.

The state was encouraged to:

1. Improve the ability to collect and analyze data to direct state and local strategic efforts through:
   a. Training and validation of birth and death certificate data, particularly the reporting of race, ethnicity, smoking, and alcohol use.
   b. Exploring other sources of data on associated risks of infant mortality.
   c. Amending the Public Health Code to allow the identification of women experiencing a fetal death in order to properly study this phenomenon.
   d. Providing funding and technical assistance for development and support of local FIMR teams.
   e. Promoting consistency among Medical Examiners in determining the cause of unexplained infant deaths.
   f. Including indicators in the Title V plan that specifically address American Indian disparities.
   g. Regular evaluation of the efficacy of and targeting of resources for state funded infant mortality programs.

2. Improve access and quality of services available to pregnant women to improve maternal health and reduce the incidence of premature delivery and low birth weight.
   a. Adopt and promote prenatal care core concepts similar to those developed by Kent County.
   b. Foster the expectation among women and providers that prenatal care begins in the first trimester regardless of insurance coverage.
   c. Promote midwifery as a model of care for American Indian and other cultures that prefer this model through improved provider reimbursement and practice incentives.
   d. Support traditional or cultural practices, such as American Indian healing, to enhance contact with health care.
   e. Support outreach and advocacy to the at-risk population, mentoring and support for families to assure use of resources, and incorporate indigenous health workers and faith-based initiatives to help with service provision.
   f. Support public health and community based health care resources that are more easily accessed and/or acceptable to the at-risk populations.
   g. Advocate for the institutionalization of Healthy Start[5] as a permanent, federally funded, community-managed program, similar to Head Start, to reduce infant mortality.
   h. Improve access to mental health providers and substance abuse treatment facilities.

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5 Healthy Start is a federally funded program to provide outreach, case management, and health education to the communities at highest risk of infant mortality. At the present time there are five funded projects in Michigan.
   i. Assure screening and linkage to MSS/ISS-like services for all at risk women to improve their social/psychological environment.
   j. Assure coordination of care between programs and parts of the health care system through incentives and evaluation.

k. Assure availability of mechanisms to assist transportation, including Medicaid reimbursement where applicable.
l. Work with providers who interact with women to expand knowledge of the importance of preconceptional care including primary health care, availability of non prescription vitamins, and health education.
m. Work to assure adequate and timely reimbursement of providers.

3. Reduce associated risks for infant mortality through:
   a. Introducing options for Work First requirements that allow new mothers time to focus on their new infant during the first year of life.
   b. Developing a statewide social marketing campaign to educate the public about behaviors that contribute to a healthy pregnancy and healthy babies, including the importance of fathers in the lives of their children.
   c. Promoting the comprehensive risk assessment of all pregnant women, particularly for sexually transmitted infection, substance abuse, smoking, domestic violence, depression, social support, sexual abuse, adequacy of housing, employment, transportation and other basic needs.
   d. Establishing one clear message of safe sleep position and environment for infants.
   e. Provide MSS services to women who have experienced an infant, fetal or pregnancy loss, possibly using MOMS funding.
   f. Expanding the options for parenting classes to meet the needs of more families.
   g. Reduce all barriers to women seeking use of contraceptive methods to reduce the incidence of unintended pregnancy.

Appendices

The Planning Committee

Michele Corey,
Director of Community Advocacy
Michigan's Children

Paulette Dunbar, Director
Program Development Section
Michigan Dept of Community Health

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Work Group Facilitators, Epidemiologists & Recorders

Work Group	Facilitator	Recorder	Epidemiologist
1. Oakland	B. Yancey, RN, BSN	Y. Bouraoui, MPH	E. Eby, MPH
2. Saginaw	P. Vasilenko, PhD	R. Fournier, RN	J. Hogan, PhD
3. Ingham	J. Marshall, MD	M. Conklin, MS, JD	C. Arole, MD, MPH
4. Kent	J. Moore, MD	S. Hudson, MSN	C. Miller, DDS, PhD
5. Detroit	S. Womack, MD	S. Frank, JD P. Dunbar, RD, MPH	V. Gilbert, MPH
6. Wayne	J. McComish, PhD	K. Miller, MA	R. Malouin, PhD, MPH
7. Washtenaw	M. Strasz	M. Holmes, RN	E. Clement
8. Berrien	M. Adkins, MSW	J. Bach, MS	T. Patenga, MPH
9. Genesee	M. Franks	B. Henry, MSW	J. Kan, MD, DrPH
10. Native American	E. Knurek, MPH	S. Meade, MPH	S. Everett, MPH
11. Community Action	M. Corey	T. Covington, MPH	B.P. Zhu, MD, MS

AGENDA

8:00 – 9:00 a.m. **Registration and Breakfast**

9:00 – 9:30 a.m. **Welcome and Overview**
James K. Haveman, Jr., Director
Michigan Department of Community Health

James A. Buford, MPH, Director
City of Detroit Health Department

Patricia Soares, RN, MPH, Director/Health Officer
Wayne County Health Department

9:30 – 10:30 a.m. ***Infant Mortality in Michigan***
David R. Johnson, MD, MPH
Deputy Director/Chief Medical Executive
Michigan Department of Community Health

10:30 – 10:45 a.m. Break

10:45 – 12:00 N ***Healthy Babies, Healthy Start: Success in Collaboration***
Arthur R. James, M.D.
Borgess Medical Center, Borgess Women's Health
Kalamazoo, Michigan

Improving American Indian Perinatal Outcomes: The Maajtaag Mnobma adzid HealthyStart Project
Elizabeth Knurek, MPH
Geradine Simkins, MSN
Inter-tribal Council of Michigan, Inc.
Sault Ste Marie, Michigan

Reducing African American Infant Mortality in Genesee County
Robert Pestronk, MPH, Health Officer/Director
Genesee County Health Department
Flint, Michigan

12:00 – 1:00 p.m. **Lunch**

AGENDA (continued)

1:00 – 1:45 p.m. ***Preventing Infant Deaths:***
Essential Elements for Success
William M. Sappenfield, MD, MPH
Maternal and Child Health Epidemiology Program
Centers for Disease Control and Prevention

1:45 – 2:00 p.m. **Break**

2:00 – 4:00 p.m. **Work Groups on Reducing Disparity**

1. **Oakland County**
2. **Saginaw County**
3. **Ingham County**
4. **Kent County**
5. **Detroit**
6. **Wayne County**
7. **Washtenaw County**
8. **Berrien County**
9. **Genesee County**
10. **Native American Infant Mortality**
11. **How to Organize Community Action Around Infant Mortality**

4:00 – 4:30 p.m. **Wrap Up and Evaluation**
Next Steps: Final Report

Those who turn in an evaluation sheet will receive a Certificate of Attendance for 3½ hours of contact time for continuing education.

Work Group Session Agenda

Task:
1. Review data concerning this area or population.
2. Summarize key problems or issues faced by the area or population.
3. Develop recommendations for consideration by local initiatives and state agencies.

Outcome:
1. A local agenda for reducing infant mortality.
2. A compiled report for the state legislature.

2:00 – 2:30 Presentation of Community Data

2:30 – 3:00 Analysis and Strategy Development

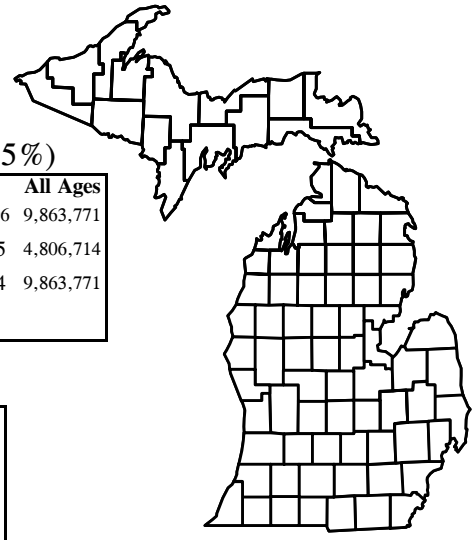
3:30 – 4:00 Summary and Recommendations

2:00 Epidemiology Presentation
- County profile information
- Periods of Risk Analysis

2:30 Facilitator Led Analysis and Strategy Development
- Feedback on the data
- Which period of risk demands our attention first?
- Understanding that each period is associated with primary preventive directions, what local issues should be considered to improve these determinants?
- What community assets could be directed toward impacting these determinants?
- What are important issues that seem to be a barrier to improving the system?
- Who in the community can affect change to make this happen?
- Using the Functional Matrix, what role could each entity play to impact behaviors, health care systems, and social-political factors.

3:30 Recommendations
- From all the information presented today, what are the most prominent findings regarding what needs to be done to impact infant mortality in your city/county?
- Who is essential to be engaged if your community is to see improvement?
- How must each person/entity be engaged? Who can get them to engage? How will you keep them engaged?
- What recommendations do you have for local and state policy makers that can support your community in its efforts?

STATE of MICHIGAN



1999 Population (Population density: 175 persons per square mile; Individuals living below poverty level: 11.5%)

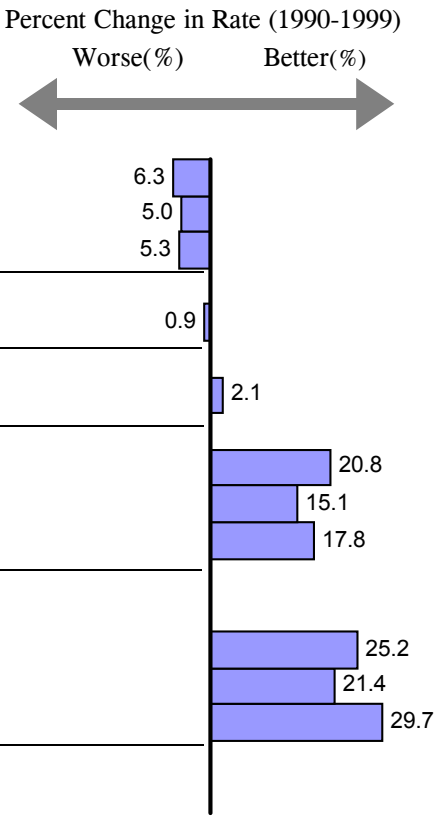
	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+	All Ages
Total	133,145	539,727	727,325	711,917	691,924	645,644	719,040	715,758	794,485	808,340	717,560	602,792	468,314	364,104	1,223,696	9,863,771
Male	68,115	276,176	372,399	364,537	352,599	325,779	358,764	354,463	391,502	396,375	353,474	296,791	229,390	173,185	493,165	4,806,714
Female	65,029	263,551	354,925	347,379	339,325	319,865	360,275	361,295	402,983	411,967	364,083	306,002	238,924	190,918	730,534	9,863,771

Race(%): **White (79.8)** **Black (17.8)** **Native American (0.8)** **Asian/Pacific Islander (1.7)** **Ethnicity(%):** **Hispanic (4.0)**

Live Births

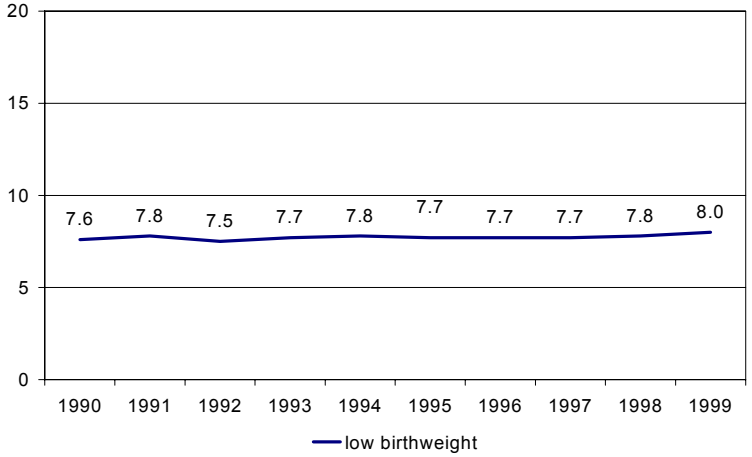
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Total	153,080	149,478	143,827	139,560	137,844	134,169	133,231	133,549	133,649	133,429
White	118,180	114,983	111,458	108,329	106,828	105,274	104,922	104,980	105,161	104,493
Black	31,842	31,543	29,656	28,249	27,129	24,914	24,073	24,201	24,179	23,850
American Indian	805	766	750	759	841	792	802	761	722	696
Asian & P.I.	1,754	1,704	1,416	1,589	2,209	2,281	2,441	2,829	3,052	3,464

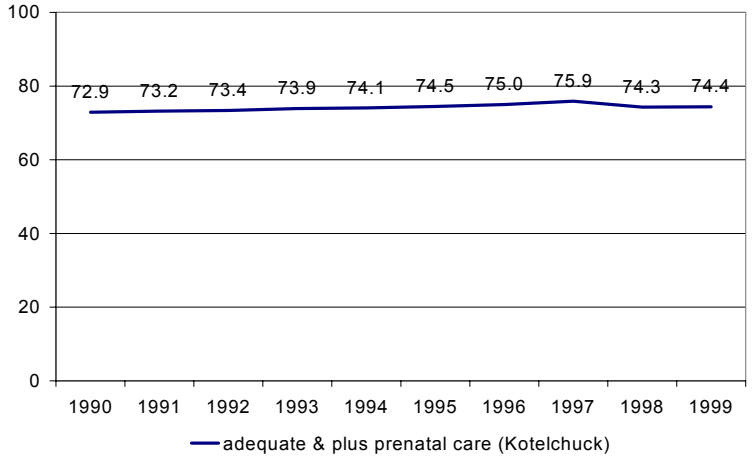
	1990		1991		1992		1993		1994		1995		1996		1997		1998		1999	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Low Birth Weight																				
<1500	2,386	1.6	2,326	1.6	2,198	1.5	2,098	1.5	2,201	1.6	1,981	1.5	2,035	1.5	2,095	1.6	2,106	1.6	2,238	1.7
1,500-2,499	9,222	6.0	9,380	6.3	8,631	6.0	8,602	6.2	8,564	6.2	8,375	6.2	8,193	6.1	8,240	6.2	8,362	6.3	8,465	6.3
Total <2500	11,608	7.6	11,706	7.8	10,829	7.5	10,700	7.7	10,765	7.8	10,356	7.7	10,228	7.7	10,335	7.7	10,468	7.8	10,703	8.0
Preterm																				
Preterm <37 weeks	16,240	10.7	16,562	11.1	15,640	10.9	15,488	11.1	15,022	10.9	14,196	10.6	13,778	10.3	14,319	10.7	14,646	11.0	14,368	10.8
Adequacy of Prenatal Care Utilization (Kotelchuck)																				
Adequate & plus	111,629	72.9	109,423	73.2	105,564	73.4	103,148	73.9	102,134	74.1	100,022	74.5	99,920	75.0	101,371	75.9	99,338	74.3	99,243	74.4
Live Births to Teen Mothers																				
<18	7,411	4.8	7,159	4.8	6,841	4.5	6,736	4.6	6,697	4.6	6,530	4.6	6,241	4.4	5,660	4.0	5,419	3.9	5,020	3.8
18-19	13,239	8.6	12,580	8.4	11,873	8.3	10,833	7.8	10,751	7.8	10,291	7.7	9,988	7.5	9,976	7.5	10,098	7.6	9,790	7.3
Total under 20	20,650	13.5	19,739	13.2	18,714	13.0	17,569	12.6	17,448	12.7	16,821	12.5	16,229	12.2	15,636	11.7	15,517	11.6	14,810	11.1
Infant & Child Mortality (Number and rate/1,000 live births)*																				
Fetal deaths	830	---	775	---	755	---	726	---	731	---	767	---	759	---	798	---	830	---	784	---
Infant deaths	1,638	10.7	1,554	10.4	1,460	10.2	1,319	9.5	1,184	8.6	1,110	8.3	1,072	8.0	1,085	8.1	1,091	8.2	1,071	8.0
Neonatal	1,073	7.0	1,003	6.7	962	6.7	856	6.1	775	5.6	725	5.4	703	5.3	748	5.6	709	5.3	729	5.5
Postneonatal	565	3.7	551	3.7	498	3.5	463	3.3	409	3.0	385	2.9	369	2.8	337	2.5	382	2.9	342	2.6
Age one to nine	405	---	442	---	423	---	435	---	386	---	390	---	353	---	327	---	348	---	323	---
Age ten to nineteen	802	---	824	---	726	---	746	---	800	---	692	---	690	---	704	---	630	---	579	---
WIC Program(participation/target base caseload)																				
Ratio(%)	—	—	—	—	—	—	—	—	—	89.0	—	90.0	—	90.0	—	97.0	—	94.0	---	91.0

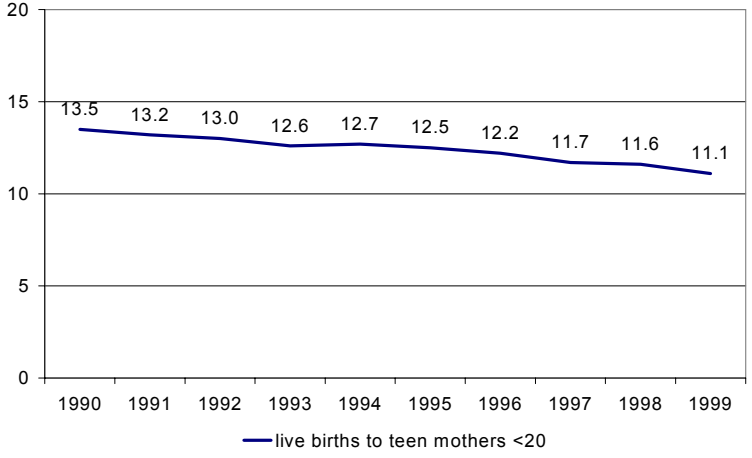


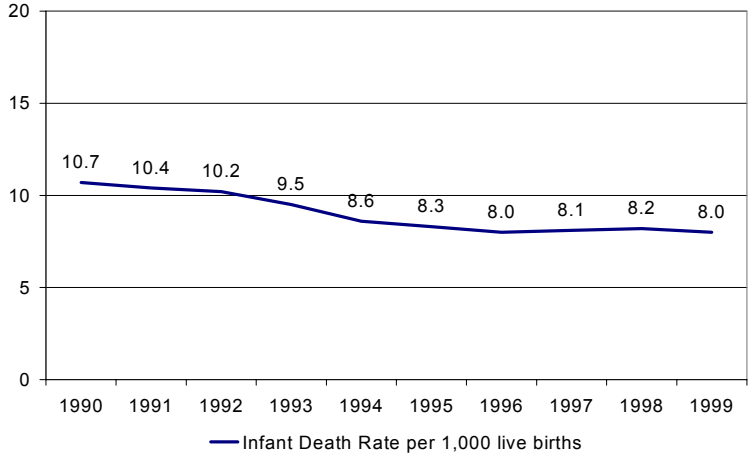
*If number is less than 6, the rate is not calculated.

TRENDS (1990-1999)









MCH PREVENTION BY PERINATAL PERIODS OF RISK - of Michigan Feto-Infant Mortality

Birth weight by age of death		Comparison of perinatal mortality rate			Focus of MCH prevention
		1999	1990	Difference	
< 1500g (all deaths)		4.2	5.3	(-1.1)	Maternal health/prematurity
1500g +	Fetal	2.0	1.9	0.1	Maternal care
	Neonatal	1.6	2.1	(-0.5)	Newborn care
	Postneonatal	1.9	3.0	(-1.0)	Infant health
Total		9.8	12.3	(-2.5)	

Fetal deaths: Death prior to the complete expulsion or extraction from its mother of a product of conception, having passed through the 20th week of gestation or weighing at least 400 grams with no signs of life.
Neonatal deaths: Deaths occurring to infants less than 28 days of age.
Postneonatal deaths: Deaths occurring to infants 28-364 days of age.

Perinatal Periods of Risk Model